IN THE DISTRICT COURT
OF DALLAS COUNTY, TEXAS
193rd JUDICIAL DISTRICT

Cause No. 08-10425

TELEPHONIC DEPOSITION OF DAVID W. PYATT, Ph.D.
July 16, 2010

KELVIN KHIEU and NARIN KHIEU,

Plaintiffs,

vs.

AGE REFINING, INC., et al.,

Defendants.

PURSUANT TO NOTICE AND SUBPOENA, the telephonic deposition of DAVID W. PYATT, Ph.D., was taken on behalf of the Plaintiffs, pursuant to the Texas Rules of Civil Procedure, at 2660 Canyon Boulevard, Boulder, Colorado 80302, this date at 10:01 a.m., before Cyndi N. Erdmann, Professional Court Reporter and Notary Public.

APPEARANCES:

ALLEN M. STEWART, Attorney at Law, from the Law Offices of Allen M. Stewart, P.C., 325 North St. Paul Street, Suite 2750, Dallas, Texas 75201, appearing on behalf of the Plaintiffs.

JEFFREY R. ALLEN and RACHEL L. WRIGHT, Attorneys at Law, from the Law Firm of Shannon, Gracey, Ratliff & Miller, LLP, 1000 Ballpark Way, Suite 300, Arlington, Texas 76011, Suite 420, Colorado Springs, Colorado 80903, appearing on behalf of Defendant Berryman Products, Inc.

NANCY GRIFFIN SCATES, Attorney at Law, from the Law Firm of Germer Gertz Beaman & Brown, LLP, 301 Congress Avenue, Suite 1700, Austin, Texas 78701, appearing on behalf of Defendant Rust-Oleum Corporation.

(Mr. Stewart appeared by telephone from his office in Dallas, Texas. All other parties were present in the deposition room.)

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WHEREUPON, the following proceedings were taken pursuant to the Texas Rules of Civil Procedure:

MR. ALLEN: For the record, the counsel to the deposition have agreed that one objection will be good for all for purposes of this deposition.

MR. STEWART: Right. That's fine. So, madam court reporter, can you tell me if you have in front of you Plaintiffs' Second Amended Notice of Oral Telephonic Deposition?

(Discussion off the record.)

(Plaintiffs' Deposition Exhibit No. 1 was marked.)

DAVID W. PYATT, Ph.D.,

having been duly sworn to state the whole truth, testified as follows:

EXAMINATION

BY MR. STEWART:

Q. Please state your name.

A. David Pyatt.

Q. And, sir, I'd like to show you what's been marked as -- in this deposition as Pyatt 1. Could you take a look at that, please?

A. Okay.

Q. Have you seen this document before today?

A. Yes.

Q. And when you saw it, did you review it in detail -- detail just meaning did you read it all?

A. Yeah, I read it.

MR. STEWART: Okay. My office has been supplied with materials and those materials, I believe, are set forward in another document which we will now mark as Pyatt No. 2. That will be documents provided to Dr. David Pyatt.

(Plaintiffs' Deposition Exhibit No. 2 was marked.)

Q. (BY MR. STEWART) Okay. Now, Dr. Pyatt, if you could look at Pyatt 2 and answer the following question; does Pyatt 2 accurately represent all the materials that you believe are responsive to Pyatt No. 1, the Subpoena Duces Tecum, with the exception of e-mail correspondence?

A. I don't know. That will take a minute. I need to go through it.

Q. Please do.

(Pause.)

A. Yeah, I think it's okay on No. 1. "Expert's complete file, present litigation, reports, et cetera, updated testimony list," yes. Okay. That's fine.

"Updated CV," sure. "Prior testimony" --

oh, wait. That's different than 2. So "reports" -- I didn't write a report -- "correspondence," you've excluded that. "Calculations," okay.

I did, Mr. Stuart, last night, just to give us kind of an outline to go on, I jotted down what my large, major opinions would be. I figured we could discuss those, but they will not be included on any of these things that I'm looking at now.

Q. (BY MR. STEWART) Okay.

A. "Transcripts of depositions or trial testimony," no. You don't have any of those. You just have a listing of the depositions. "Expert statements," I have those. I don't know if they're in this list. It doesn't look like they are. So I've brought those with me today.

Q. Okay.

A. You're welcome to them. "Any reports prepared," we did that one. "All documents from any source that the expert reviewed," I think we covered that okay.

"All treatises, texts, regulations, guidelines," no. No. I mean, there's too many to do that. But I think the list of citations, which you have, on the document entitled Reliance Materials, I think, with the exception of the gasoline literature --

and we can chat about that a little as well -- but I think those are adequate representations of the science that I would need to support my opinions.

But textbooks and other papers and things, I mean, it's not -- that is not all inclusive. I think it would be adequately support my opinions though.

"Communications" -- No. 10, "Communications," I think that's what you guys were talking about. I didn't bring those because Mr. Allen told me he was giving those to you or had them in a pile somewhere.

No. 12, "Documents related to any meeting or conference calls," I don't know of any of those. Thirteen looks like the same. Fourteen, I didn't do any calculations.

I didn't bring all of the medical records. I brought a few that I think are important, but I didn't bring all of them. Fifteen doesn't look like that's relevant.

Oh, and then the container -- 16 is not relevant either. Okay. So does that answer your question kind of?

Q. I think so. If I understand what you've basically said, with respect to No. 5, which is transcripts of depositions or trial testimony, you did

not bring those. In lieu of those, you provided a list of the things that you have testified in, right?

A. That's correct. You have a list of all of the deposition testimony that I have ever given, but no transcripts of those actual depositions.

Q. Got it. And do you have those transcripts?

A. Oh, I have probably a few. I doubt I have all of them. Some of them I have electronically. Some of them I might have a hard copy. I would have to go back and look. Some of them I do for sure.

Q. All right. And then you said on No. 6 you actually brought your statements with you, right?

A. Yes.

Q. What I'd like you to do with those, if you could, is why don't we just, at the end of the deposition, whatever number we're on for exhibits, we'll just make that last one "Pyatt next," and if you all will just provide a copy of those at the back, that's fine.

A. Okay. Just remind me when we get there.

Q. And then I think you said with respect to No. 9, that says, "All treatises, texts, regulations guidelines, statutes, policies, procedures, et cetera," that you didn't bring those, but you think that those

will be represented in the list of reliance materials that you have provided. Am I stating that accurately?

A. I think the list that I have is an adequate list to scientifically support my opinions, but it is not all inclusive. And a lot of things that I have learned about AML and how AML develops and is treated and what it looks like, those are from medical textbooks and lots of other studies that I didn't include in this list.

So the way it's written is just very all inclusive, and the list that I provided is inclusive enough for my opinions in this case but not all inclusive for everything that I've ever learned about benzene and/or AML.

Q. I think I follow the distinction that you're making. Let's just make sure I'm clear with what we're after here.

In No. 9, are there going to be any other materials, written materials, that you are going to be relying upon for your opinions that are not included on the list that is now Pyatt 2, "Documents provided to Dr. David Pyatt," and then the heading on the next page, "Reliance Materials of Dr. David Pyatt"?

A. Yes, Mr. Stewart. There will be. And I apologize, it just occurred to me after all this was

done, but the only other thing that I believe I would probably want to talk about in the trial would be the literature that is associated with gasoline exposure and all the epidemiological studies that have been conducted on workers exposed to gasoline, relevant in that gasoline has far more benzene in it than any of the products alleged in this case.

So I think that literature is relevant to my opinions. And that is not on here. And I can give that to you an hour after I get back into my office if you would like it. That's the only thing that I believe would be important enough to add to this list.

Q. And how large is that?

A. Well, the literature -- the gasoline literature is pretty extensive. I did make a list, just off the top of my head, this morning before we started because I had expressed that same opinion to Mr. Allen. And he said, Well, how many of them are there?

So this is a pretty representative list. And it looks like maybe there are 10 or 15 -- oh, no, probably 20 studies. And I can read those if you'd like or we can make a copy of this handwritten list or you can just wait and I'll give you all of these studies.

Q. And when did this occur to you that these studies would be relevant to the opinions that you have in this case?

A. Well, I think I've always known it. I think I've always thought that that's an important piece of the puzzle. That I wanted to actually rely on it only occurred to me a couple of days ago.

And I think it occurred to me when I started looking at this list of citations that I provided. I mean, it was hard for me -- a little harder in this case -- because I didn't write a report.

And when I write a report, that kind of is a good way for me to get my opinions together and all the literature supporting those opinions together. And so this one was a little more free form because I didn't have that structure.

But I'll be happy to give you the gasoline literature citations, and I can put them on a disk if you don't have them so that you have all the things that I'm talking about.

Q. So you have them written out on a list there in front of you?

A. Yeah, the ones that I could remember off the top of my head.

Q. And how many are on the list?

A. Twenty-four.

Q. And these are 24 new articles that are not on your -- the documents provided by David Pyatt, Pyatt No. 2 list, and the reliance materials; is that correct?

A. Well, no, not exactly, because, for example, the Adegoke 2003, that is on the list because it had an investigation on toluene but it also had investigation on gasoline. So I mean, I wrote it down thinking about the gasoline literature. So some of them are on this list, but some of them are not.

Flodin is on this list. Glass is on --

Q. Here's what I'd like you to do. I would like you to tell me the articles that you have written down about -- what you're calling the gasoline literature -- I'd like you to read those into the record, the articles that are not on the list that we have been provided as your reliance materials in this case.

A. Okay. You bet. So the first one that's not on here is Flodin, F-l-o-d-i-n, published in 1990. The next one is Giles, G-i-l-e-s, published in 1984. Okay. Then there's one -- first author is Grandjean, G-r-a-n-d-j-e-a-n, published in '91.

Hansen, H-a-n-s-e-n, I don't remember the

year it was published. Okay. Rushton, R-u-s-h-t-o-n, published in 1993.

Schnatter, S-c-h-n-a-t-t-e-r, also published in 1993. Jakobsson, J-a-k-o-b-s-s-o-n, and spelling can't count here because I'm doing this off of memory, 1993. Lewis, 2000.

Lindquist, 1993. I believe that's on here. Pasqualetti, P-a-s-q-u-a-l-e-t-t-i, published in 1991. Schwartz, S-c-h-w-a-r-t-z, published in 1987. Terry, T-e-r-r-y, published in '05. Wong, I know I have that one, 2010. There it is. But another Wong, 1999. And another Wong, 1993. Sathiakumari, S-a-t-h-i-a-k-u-m-a-r-i, I'm guessing on that one, 1995.

And then there are some regulatory documents where they specifically evaluated the carcinogenicity of gasoline; the one by ATSDR, Volume 45 by IARC, The World Health Organization, ACGIH, their TLV documentation, US EPA, a letter to -- I can't remember -- it was a memo, internal memo, on the carcinogenicity of gasoline. So those are the ones that I came up with sitting here this morning.

Q. And I take it that as you sit there, you don't have those documents with you, right?

A. Only the ones that would be on this list,

but, like I said, I'll be happy to give those to you within an hour of me being back at my office.

Q. And when you said "only the ones that would be on this list," what you're saying is the only ones that you have brought with you for the deposition have been the ones that are on the Pyatt No. 2 document, correct?

A. That's correct. Those are the ones that I have -- and not all of these -- but the more important of these I have a hard copy. And then apparently you made a copy of all of them because they're sitting down here in a big pile. So it looks like we would have a hard copy of all of these studies on the reliance list.

Q. Let's do this; what I would like for you to do for me is I would like for you to now read into the record the articles that you brought hard copies of, which I understand you are describing these articles as the ones that you consider the most important for your opinions; am I right?

A. Yes.

Q. Okay.

A. There's a lot of them. Are you sure you want to do that? There's a bunch of them.

Q. I do. I want you to read off into the record which articles you've brought with you.

A. Okay. All right. So this is in a binder called "Painter Literature, Painters and AML," Adegoke, 2003. Is that sufficient for me to do that or --

Q. Yes. If you can just identify how you've labeled it on your Reliance Materials list, Pyatt No. 2, that would be fine.

A. Okay. So then this one would be Adegoke, 2003. So that's on there. Berlin, 1995. That's on there. Blair, 2000. Bethwaite, 1990.

Q. Did you say Seth White with an "S"?

A. No. Bethwaite. It's underneath Berlin, 1995. Then Blair, 2000. Bacardi, 2002. Brown, 2002. Cartwright, '88. Chen, 1998. And then Chen 1996. And then Chen 1999.

Chiaza, 1980. Costantini, 2001. Demers, 1993. Everybody is getting board and leaving. Pretty soon it'll just be me and the court reporter. Englund, 1992. Do you see that one?

Q. Dr. Pyatt, I missed that one. What was that one?

A. E-n-g-l-u-n-d, 1992 -- sorry, sorry -- 1982 and 1980. Those two Englund papers. Flodin, '86.

Firth, 1993. Freedman, 2001. Gueberon, 1989, Hinneman, 1992. IARC, 2005.

Q. So on my list, you've got three different

listings for IARC. You've got IARC Toluene, IARC V. 47, and IARC V. 47, No. 2.

A. I don't know what that is, V. 47, No. 2, because there's only one V. 47. But the one that I'm looking at now is the IARC Monograph specifically on painting. And it's really not Volume 47 or 45 or the Toluene IARC, although the Toluene IARC is connected to it.

But this is where they looked at the occupation of painting, and I'm looking to see what -- it doesn't really have a number on the top of it. It's called the IARC Monograph, "Program Finds Cancer Hazards Associated With Shift Work, Painting and Fire Fighting." That's the name of the document.

Okay. Then J-i, 2005. Lazarof, 2000. Then Li, L-i, 1994. Lindquist, '87. Lundburg -- I think there's two -- '86 and '98. Manatowski, '86.

McClean, 2008. Melay, 1994. Nicholson, 1980. Miller, 1986. Morgan, 1981. Pasqualetti, 1991. That is on the other list. And then Risse, R-i-s-s-e, 1995. Sorhan, 2004. Steinland, 1999.

Q. I'm sorry, you said Sorhan 2004, and I've got a Sorhan on your list 2005. Is that what you mean?

A. I don't know. Let me look. It's possible. The study is gone. I have the little tab

for it. Let me see if I can track it down. I think it's 2004, but I could be wrong. What is it on this list, 2005?

Q. Yes.

A. Yeah. I think it's the same thing. Hold on a second. I don't know. I'm going with 2005.

Q. That's fine. Then the last thing you said before I interrupted you was Steinland, 1998.

A. Or 1999.

Q. It's on your list at 1998.

A. That is wrong. It's 1999. I'm looking at the study. Terry, 2005. That one is not on here. That would be in the gasoline stuff. We had a section for painting as well. Terstegge, 1995.

Q. Where is Terstegge on the list?

A. It isn't. It isn't. You can have it or -- T-e-r-s-t-e-g-g-e is the first author. The paper is entitled "Mortality Patterns Among Commercial Painters in the Netherlands," and it was published in 1995. It was just in the binder for painters, Painting and AML.

All right. Then, let me see -- Viadoni, '72. Viadoni, 76. Wang, 1999. That's it for this binder.

All right. This one is labeled -- it's my

binder -- Benzene and AML. It has every study in here that I've ever found that evaluates, from a quantitative point of view, how much benzene it takes to increase the risk of AML. So a lot of these are on the list, perhaps not all of them. You want me to do the same thing, go through it?

Q. Well, I guess. What I think I hear you saying is you've brought binders with you, some of which contain materials that are not on the list that you provided us of what your reliance materials are, true?

A. Yeah, there would be a few of those. There's a few in the binders. The binders are what I keep in my office. They're not responsive to this list. They're just all the studies that fit within that category.

When I generated this list, I just went through electronically and said, okay, what papers do I think are going to be the most important? And I generated this list that I gave to Mr. Allen and that's what you have. So they're not going to be exactly the same. But as you can tell, the vast majority --

Q. Wait a second, Dr. Pyatt. Just so we're clear, you understand that this list that I've been provided is supposed to be the list of materials that

you have reviewed and relied upon in reaching the opinions that you have in this case, right?

A. Well, I didn't realize that it had to be all inclusive and if it wasn't on the four corners of this list, then I couldn't rely on it. No, I didn't have that impression. If that was --

Q. Hold on Dr. Pyatt. How long have you been doing this kind of work?

A. Doing what kind of work?

Q. Being an expert in litigation.

A. I think I gave my first deposition in 2006, so maybe four years.

Q. Okay. And during that four-year period of time, you have not reached the conclusion that you are supposed to provide to the other side the materials that you are relying upon for the opinions that you have in a case prior to the time you are deposed?

MR. ALLEN: Object to form.

A. In a general manner I think that's true. But I haven't had anyone, with the exception of one time that I recall, tell me specifically, you need to include every single study that you would ever want to rely on if this goes to trial because you will not be able to talk about it in the trial if it's not on this list.

So that one was totally all inclusive, and I made sure every single study that I could possibly think of was on that list. That is not the instructions that I got for generating the list that you're looking at. I was not instructed that this has to be all inclusive, but this list does adequately support my opinions.

Q. (BY MR. STEWART) Okay. So you were not told that prior to this deposition you needed to provide to the lawyers who are there with you or the lawyers on the other side of this matter, which is me, with a list of all the materials that you would be relying on for the opinions that you would be providing in this case, right?

A. Not as an exclusive matter, no.

Q. Okay. What I would like you to do now is I would like you to go through the materials that you have with you -- that you brought with you that you think are important for this case that are on this list.

A. Okay. Right. Just what we were doing the other time.

Q. Exactly. On the Reliance Materials list that was previously provided to me. I want you to go through the list of things you've brought with you, the

articles you've brought with you, that are the -- what you consider the important articles that support your opinions that are on the Reliance Materials list that is now in this deposition as Pyatt No. 2.

A. Okay. Sure. So Adegoke, we've already seen that one. All of these Aksoy studies, I've brought all of those. So all of those I have.

These are only going to be the ones that I'm going through now that would be categorized as benzene and AML. For example, the Andrews 1997 paper, that's important, but it's important for another reason. That was not an epidemiological study of benzene and AML. Just so we're clear on that.

So all the Aksoys, Blumen, Bond, both of the Bond papers, Collins, Decoufle.

Q. 1983 Decoufle?

A. Yep. Costantini. It's not Constantini, it's Costantini. And there's a 2001 paper, which I have in here, but there is also a 2003 paper. So it's misspelled. And it's not complete. Finkelstein, 2000.

Fu, 1995. All the Glass papers, letters to the editor, updates and things. There's six of those. I've got all of those, I think.

Guenel, 2002, G-u-e-n-e-l. Haze, 1997. Hunting, 1993. Wait. Sorry. I do have that one, but

it's in a different binder. Ireland, 1997. Kirklight, 2008. I don't know why that's three times because it's just one.

Okay. Ott '89, then '85. Passe, '89. Paxton, 1994, Parts 1 and 2. Rappaport, 2005 and 2009, and 2002, and there's only one of those. Richardson, 2008. And there's only one of those.

A whole bunch of them by Bob Rinsky; '87, 2002. And there's only one. I don't know what the two means.

Oh, I see why the Sorhan was confusing. It was accepted in 2004, but it didn't come out until 2005. And the Sorhan is 2005. I think that's what I said earlier. So that one -- you have it now. Lutz --

Schnatter, 2005, 1996, 2009. Wong, 1987, Part 1 and 2. Wong, 1995. Wong, 2010. Yen, 1987 and 1986, and there is only one of those. So those are the benzene and AML ones.

Okay. Then I've got regulatory documents for mineral spirits and toluene. So would be the ATSDR, those three there. And on the second page, IARC volume for toluene and IARC Volume 47 which are mineral spirits, et cetera. I think that's all.

And I did not bring a hard copy of the cytogenetic studies. So they're on the list, but not

in the room. I wasn't sure if we would get into that in sufficient detail to need the actual studies.

Epidemiology -- it looks like those are the ones I have hard copies of in the room.

Q. Okay. So what I would like you to do for me now, Dr. Pyatt --

MR. STEWART: Well, madam court reporter, let's mark as Pyatt 3 the Rust-Oleum Designation of Experts, and Pyatt No. 4 as the Berryman Supplemental Designation of Experts, please.

(Plaintiffs' Deposition Exhibit Nos. 3 and 4 were marked.)

Q. (BY MR. STEWART) Let's turn to -- in both of those documents if we could -- I think it's page 2 on the Rust-Oleum document, and it is page 5 on the Berryman document -- if you could turn to the designation of what you're going to be talking about.

A. Okay.

Q. All right. Now, I am focused on -- in both these designations, it says "Defendant anticipates Dr. Pyatt's testimony will include the following subjects." Do you see where I am?

A. Yes.

Q. If you could, could you look at both of those paragraphs -- or that paragraph there -- and tell

me if those appear to be identical to you?

(Pause.)

A. They look to be identical to me.

Q. (BY MR. STEWART) All right. Now, sir, my question is, did you provide the defendants with this kind of language for your designation?

A. No.

Q. Okay. What I would like to do, since they appear to be identical, is just turn to one of them, recognizing that they are identical -- it appears that you've been designated for exactly the same thing by both defendants -- and just go through the list and talk through these points if we could.

A. Okay. Sure.

Q. The first one says that the defendants anticipate your testimony will include "toxicology hematology and the scientific literature regarding benzene and other chemicals which may be alleged to be relevant in this case."

And what I would like you to do for me, if you could, Dr. Pyatt, is on that subject, can you tell me what you anticipate your testimony will be with respect to those issues as it relates to Mr. Khieu's case?

A. Yes, I'll do the best I can. That's a

good question. If I had thought of that yesterday, I would have had it all written out for you. But sure, I'll do the best I can.

I would think that what I would want to discuss on this subject is what do we know about the toxicology of benzene with regard to bone marrow toxicity, hematopoietic effects, AML development, those kinds of things and how that differs from the toxicology of mineral spirits, toluene and some of the other solvents that Mr. Khieu was using in the workplace.

And then talking about -- and that would be both the experimental toxicological data related to these substances as well as the epidemiological studies, looking at workers, for example, that have been exposed to toluene versus workers that have been highly exposed to benzene and contrasting those. I think that would be a fair general assessment of what I would cover at that point.

Q. All right. And do I understand you to say that -- let me just change that question. Are you of the opinion that benzene is contained in Rust-Oleum's product that Mr. Khieu was exposed to?

A. Yes.

Q. Are you of the opinion that benzene was

contained in the Berryman products that Mr. Khieu was exposed to?

MR. ALLEN: Objection to form.

A. Yes.

Q. (BY MR. STEWART) Forgive me. I didn't hear your answer to that last one. It sounded like you all were talking over one another, but it might just be the connection.

MR. ALLEN: I objected to the form.

Q. (BY MR. STEWART) All right. There was a little cut out there.

MR. ALLEN: Sorry. We'll try not to talk over one another.

Q. (BY MR. STEWART) That's all right. So Dr. Pyatt, if I understand you correctly, it is your opinion that benzene was contained in the Berryman products that Mr. Khieu was exposed to, right?

MR. ALLEN: Object to the form again.

A. That's my understanding, yes.

Q. (BY MR. STEWART) And it's your opinion that benzene was contained in the Rust-Oleum products that Mr. Khieu was exposed to, correct?

MR. ALLEN: Object to the form.

A. I've seen small amounts of benzene in some of the Rust-Oleum products that he may have been using.

Some of the Rust-Oleum thinners are acetone based and they may not have had any benzene in them.

So I can't really answer that. But I know that the paint thinners, being petroleum based, are likely to have small amounts of benzene in them.

Q. (BY MR. STEWART) All right. Now, in connection with benzene and its toxicity, do you agree that benzene is toxic to the blood and blood forming organs?

A. Not the way you worded that, no.

Q. What is your objection with the way that I worded the statement benzene is toxic to the blood and blood forming organs?

A. Well, you've got to specify what you're talking about with the blood and the blood forming organs, because there are some parts of the bone marrow that benzene has no effect on.

And most importantly, you've got to specify what the exposures are that you're questioning and the duration of that exposure.

There is benzene in a banana, and I don't believe that anyone's blood is damaged or their bone marrow is hurt by eating a banana even though they're being exposed to benzene.

Q. All right. Is it your opinion that there

is as much benzene in a banana as there was in Berryman's product that Mr. Khieu was exposed to?

MR. ALLEN: Objection to form.

A. I would have to make a comparison, but I doubt that. I doubt that there's as much benzene as there would be in these petroleum based solvents.

I only used that to illustrate that you've got to specify what the exposure levels are before you can scientifically answer whether it's going to damage the blood or not.

Q. (BY MR. STEWART) All right. Is it your opinion that benzene is not toxic to the blood?

MS. SCATES: Objection to form.

A. I really can't possibly see how you could have gotten that interpretation from what I just said.

Q. (BY MR. STEWART) I'm asking you the question, sir, is it your opinion that benzene is not toxic to the blood?

MR. ALLEN: Objection to form.

A. I think there are some levels of benzene where there's no evidence that it does cause any toxicity, but there are certainly levels of benzene where you are likely to see toxicity. So again, it's going to be solely dependent upon the exposure levels.

Q. (BY MR. STEWART) All right. So it would

be your opinion that benzene can be toxic to the blood, right?

A. Yes.

Q. And it would be your opinion that benzene can be toxic to the blood forming organs, correct?

A. Some of them.

Q. Sir, do you agree that the first description of a leukemia case related to occupational exposure to benzene occurred more than 100 years ago?

MR. ALLEN: Objection to form.

A. No, I wouldn't agree with that.

Q. (BY MR. STEWART) All right. When would you say the first description of a leukemia case related to occupational exposure to benzene occurred?

MR. ALLEN: Object to form.

A. Well, the first case report came out in 1928, where they thought that this bicycle tire person -- manufacturer -- may have developed leukemia associated with benzene exposure.

The papers that came out in the 1890s, that was looking aplastic anemia, not leukemia. But even the leukemia had been only case reports and scattered reports here and there until Aksoy probably in the '70s really started quantitating and choosing control populations and really doing legitimate

epidemiological studies.

And some people would even say that his weren't fully quantifiable epidemiological studies. And so then you're pushing it all the way up to the '80s where Bob Rinsky evaluated the Pliofilm workers.

Q. (BY MR. STEWART) Sir, isn't it true that Aksoy in 1980 said that there is a causal relationship between chronic occupational exposure to benzene and development of leukemia has now been established beyond doubt?

A. I would have to look. That wouldn't surprise me, because his studies were, in my view, pretty definitive through the '70s.

But if you're strictly relying on quantitative epi, that wasn't done until the '80s, and a lot of regulatory bodies, they will require quantitative epi to rule on something. But it certainly was not known a hundred years ago, and that's how we got off on this topic.

Q. That's not how we get off on that topic, sir. The topic we were on is the last question that I asked, which was; isn't it true that Aksoy in 1980 said a causal relationship between chronic occupational exposure to benzene and development of leukemia has now been established beyond doubt?

A. And I answered that wouldn't surprise me, but I don't have this papers memorized.

Q. All right. Do you agree that by 1980, a causal relationship between chronic occupational exposure to benzene and development of leukemia had been established beyond doubt?

A. No, I don't. You're asking me what my opinion was or the literature up to the point of 1980 or what the scientific community viewed that literature as? Which one do you want me to answer?

Q. I'm asking about your own personal opinion.

A. My own personal opinion is, yeah, by 1980, it was pretty clear, in my view, looking at the sum total of the published studies, that benzene in high enough levels for a long enough period of time can cause leukemia.

Q. Do you agree that all refined petroleum solvents are complex mixtures of hydrocarbons and contain benzene in them?

MR. ALLEN: Objection to form.

A. No.

Q. (BY MR. STEWART) All right. Tell me why you don't agree with that statement.

A. Well, when you get methane or propane or

some of the really light gases off the distillation stream, you're not going to have benzene in them.

The benzene is going to come out in things that have a similar boiling point to what the benzene is going to come off. But these things that come out really early, there's not going to be benzene in them.

Q. All right. Are there other examples of refined petroleum solvents besides the two that you gave that you believe are exempted from having benzene in them?

A. If that was the way you worded the question, then I misunderstood. I thought you said refined petroleum products, and then you said refined petroleum solvents. And you may have said that the first time.

If you're asking about solvents, yes, I would think that any solvent coming out of a petroleum stream is likely to have small amounts of benzene in them.

Q. How do you define a low exposure level of benzene in the occupational setting?

MR. ALLEN: Objection to form.

Q. (BY MR. STEWART) You, personally.

A. I don't know. I've never been asked that question before.

Q. So you don't have any opinion on that.
A. Well, I'm kind of ruminating on it right now. I mean, I would certainly consider someone who has been working with toluene for their occupational career would have low exposures to benzene.
But in terms of a quantification, if that's what you're looking at, I'm not sure how I would define low.
Q. Okay. So I'm clear, you don't know how you would define a low level of exposure to benzene, right, in the occupational setting?
A. Well, no. No. I mean, someone that's exposed to 1 part per billion benzene for 40 years, that's low. Someone who is exposed to 2 parts per billion benzene for 40 years, that's low. Someone who's exposed to 2.5 parts per billion benzene for 40 years, that's low.
My problem is I don't know how to define it based on way you worded the question, but I can certainly give you lots of examples where I would say, yeah, that's a low exposure to benzene.
Q. I understand that distinction. Let me ask you this; in the context of an occupational exposure to benzene, if the occupational exposure can cause disease -- if an occupational exposure to benzene can cause a

disease, do you consider that to be a low level exposure?

MR. ALLEN: Object to the form.

A. No.

Q. (BY MR. STEWART) So if I understand you correctly, if the level of benzene is capable of causing disease, by definition, it's not a low level of exposure to benzene, true?

A. Well, not necessarily. What I would say that the scientific evidence that levels of benzene that have been shown to cause disease or some adverse effect in the blood, I would not consider those to be low exposures.

Q. All right. If the scientific literature shows that people can get disease from being exposed to benzene at certain levels, whatever those levels are, you would not consider those low levels; is that true?

A. Well, yeah. I mean, we're still putting all this emphasis on the adjective low, and I just really don't know how to define that. If the consistent scientific literature -- I mean, you're always going to find a paper or two that suggests that findings -- adverse effects are occurring at say levels below the PEL, for example.

And then do you call that low? Well,

yeah. It's certainly lower than what the rest of the studies would show you. That would demonstrate toxicity associated with those exposures.

But if you have a level of benzene where the studies are consistently positive for showing some adverse effect, those aren't low. Those are pretty high exposures. They're in excess of the PEL for sure.

Q. And when you say the PEL, you're talking about the Permissible Exposure Limit, right?

A. That's correct.

Q. Now, Dr. Pyatt, what is the number that you believe today, in 2010, the scientific literature supports as being sufficient to cause acute myelogenous leukemia?

MS. SCATES: Objection. Form.

A. I think the evidence today, the epidemiological evidence, for benzene in AML would indicate that a significantly increased risk will occur in something greater than 40 part per million years with a best guess estimate to be 200 part per million years, caveated with the fact that the exposures needed to occur with a 10- or 15-year window of diagnosis. That, I think, is where the scientific literature stands today.

Q. (BY MR. STEWART) Well, let's be clear.

That's where you stand today.

MR. ALLEN: Objection to form.

A. No, I believe that's where the science stands today.

Q. (BY MR. STEWART) Okay. So can tell me, in the last 10 years -- can you name for me the papers that set forward the scientific proposition that it takes 40 ppm years or more to cause benzene related AML?

MR. ALLEN: Objection to form.

Q. (BY MR. STEWART) What papers would those be in the last 10 years?

MR. ALLEN: Objection to form.

A. Well, I can the get them out, all the quantitative studies. Bob Rinsky looked at Pliofilm in 2002. That would have been in the last 10 years, and it would support that opinion that there's no increased risk below about 40 ppm years.

The Hays study would support that. That was published in '97. Maybe that's a little outside of your window. Otto Wong's publication in 1995, that would support that.

Costantini in 2003, that would support that. All of them -- even the Glass study from 2003, I think, is consistent with that position.

Q. (BY MR. STEWART) Okay. So you think Glass from 2003 supports the proposition of someone needs to have at least 40 ppm years of exposure within the last 10 to 15 years before they were diagnosed with their AML for that AML to be related to benzene.

A. No, that's not what I said. What I said was the Glass 2003 paper was consistent with that interpretation. She didn't have 40 ppm years as one of her exposure breakout categories.

Q. Did she have numbers lower than that?

A. Yes. She saw a statistically significant increased risk of AML or ANLL at something greater than 8 ppm years.

Q. Yes. And so why is it that you don't read that study for the proposition that it only takes something greater than 8 ppm years to get benzene related AML?

A. Well, I do. The exposures in her workers went all the way up to 60. And you don't know which of the workers -- what their actual exposure levels were that got AML, but if they were in the upper end of that range, it would certainly be consistent with all the other studies, and it would be consistent with the fact and you need to have something greater than 40 before you start seeing an increased risk.

Thinking that, well, it's greater than 8, it must be 8.1, that's not right. If you look at her data in that chart, though less than 8, it is actually almost statistically significantly suppressed.

It is .5. So it's a protective effect at 7.9 ppm years. To think that it's .5 at 7.9 and then it's statistically significantly evaluated at 8.1, that doesn't make any sense. So it is something far greater than 8.

Q. How do you know it's something far greater than 8?

A. I just told you.

Q. That's your explanation for why you know it's something far greater than 8?

A. Yes.

Q. Okay. Have you named for me all the papers that have been published in the last 10 years that support your proposition that it takes at least 40 ppm years, and more probably up to 200 ppm years, of benzene exposure to get AML?

A. I don't remember which ones I named. PAML related. But if you're going to hold me to this list, then I'm going to get out that binder and we're going to go through each one of them. Do you want to do that? Do you want to have an all inclusive list or

just my recollection?

Q. Dr. Pyatt, what I want you to do is listen closely to my questions, because I've tried to craft them in such a way that they would allow you to be as inclusive as you want to be and not have us here all day.

My question was, in the last 10 years -- I'm focused on -- this would be papers from the year 2000 to 2010 -- in the last 10 years, what papers do you look to that support the proposition that you have just set out that it takes a minimum of 40 ppm years or more for an AML to be related to benzene exposure?

A. So you're drawing a line in the sand. It has to be from 2000 and up. So all the epidemiological studies from the '80s and '90s, we're not counting those, just from 2000 forward.

Q. Well, Dr. Pyatt, I'm not asking you to argue with my question --

A. I'm just asking for clarification. 2000 and forward, that's all you want.

Q. The question I just asked you, which is a bit of time, I want you to answer the question for the last 10 years, please.

A. From 2000 forward, okay. Costantini, 2003, "Exposure to Benzene and Risk of Leukemia Among

Shoe Factory Workers" clearly supports that position. We've already talked about Debra Glass's stuff.

Bob Rinsky's study from 2002 where he did a follow-up on the Pliofilm cohort, I believe that supports that position.

Gerald Swaen study published in 2005, reading from the abstract, "Despite the substantial exposures to benzene, on average, 159 ppm years per person, there was no indication for increased leukemia mortality for the cohort." So that one supports my opinion.

Q. Can you stop on that one and tell me where it is on the list? I'm sorry.

A. I don't know where it is on the list.

Q. Who is the author?

A. Swaen, S-w-a-e-n.

Q. I don't see that paper on this list. Maybe I'm missing it.

A. Let me pull out the list. Nope, it's not on the list.

Q. Let's stick to the materials that are on the list.

A. No, let's talk about all the literature that is responsive to your question. So now you want to limit it to the studies that were published from

2000 forward that are on this list.

Q. No, Dr. Pyatt. What I want to do is I want to work off the list that you provided to me as your reliance materials for this case.

A. Well, I'm going to add Swaen 2005 to this list.

Q. Let me finish my question and you can say whatever it is you want to say. Because I am relying on the list that you provided, which was your reliance materials, I want to know from the list that you have provided to me prior to this deposition -- and you've been going through that -- the articles from 2000 to 2010 that support your statement that it requires at least 40 ppm years, and probably up to 200 ppm years, for an AML to be related to benzene.

MR. ALLEN: Objection to form.

A. I mean, I'll do the best I can, but that's not fair. You're asking me questions that no one has asked me before and then you're limiting the answer to your questions to a list that I prepared in support of my opinions.

My opinion did not include that particular statement. Give me all the studies from 2000 forward that support the opinion that it has to be something greater than 40 ppm years.

So if you want to limit your questions to the three or four opinions that I've generated and ask me only questions about the opinions, then I'll stick to this list.

But if you're going to ask me just whatever questions you want to, then I think it's fair for me to pull any literature that I can find that's responsive to your question.

Q. (BY MR. STEWART) All right. Doctor, are you done?

A. It depends on what you're going to say next.

Q. Well, the next thing I'm going to say is unfortunately for you, you don't get to determine what the rules are in litigation.

A. It's disagree.

Q. We're going to operate on what the rules are in litigation, and I get to ask you the questions I want to ask you. And because I'm asking the questions I want to ask you, which are relevant to this case, and have to do with what you have produced in this case, and what you have said you would be relying on for the opinions you would be giving in this case, that's where I want to focus myself right now. I'm focusing on what you provided to me prior to this deposition.

With that, the question that is on the table for you to continue to answer, which is, please tell me, from the list that you provided to me prior to this deposition of the reliance materials, from the year 2000 to 2010, what articles on this list support the opinion that you previously gave, which is that it requires at least 40 ppm years and up to 200 ppm years for someone who has been occupationally exposed to benzene and who get AML, to relate that AML to their occupational exposure to benzene?

MR. ALLEN: Object to form.

A. Rinsky, 2002, which is on this list. The Bloemen, study from 2004. I think that's it.

Q. (BY MR. STEWART) All right. Now, I have one more question for you before we take a break. Now, what I want you to do is I want you to go back to that list, and from the year 1990 to 1999, I want you to do the same thing.

I want you to tell me the articles that you believe support your opinion that you just gave that it takes at least 40 ppm years and up to 200 ppm years of occupational exposure to benzene before an AML can be related benzene exposure, 1990 to 1999.

A. Hays, 1997. Paxton, 1994, Parts 1 and 2. Rushton, '97. Schnatter, '96. Rushton, '96. Wong,

1995. I think that's it.

MR. STEWART: Okay. With that, let's take a short break, a little bathroom break. If we can come back in five minutes, that would be great.

MR. ALLEN: You bet. Sounds good.

(A break was taken from 11:30 a.m. until 11:41 a.m.)

Q. (BY MR. STEWART) Dr. Pyatt, are you ready to go?

A. Yes. Thank you.

Q. So I want to go back to the exhibit we were looking at where we were talking about your anticipated testimony.

A. Okay.

Q. You were talking about No. 1, "toxicology, hematology and the scientific literature regarding benzene and other chemicals which may be alleged to be relevant in this case." And you started telling me about sort of in general what you thought that could be, but I didn't hear what your specific opinions were that fall into that category.

Could you give me the specific opinions that you believe that you believe you will be providing in your testimony in this case?

A. For number --

Q. Related to small little i.

A. The first one.

Q. Yes.

A. Oh. Well, I think, when you put it in those terms, it would be that there is insufficient scientific evidence to link toluene and mineral spirits and Stoddard solvent, VM&P naphthas and these other organic solvents, even though they contain some small amounts of benzene in them, there's insufficient evidence to link those to a meaningfully increased risk of AML.

So even though they have benzene in them, their toxicological and epidemiological profile is very different than that for benzene.

Q. Okay. And is that it? I mean, in its substance, is that it?

A. Sure. I think that's -- I mean, there would be lots of things that I would want to rely upon to support that opinion but, yeah, I think that adequately describes it.

Q. Okay. And in connection with that, do you believe that there is literature that supports solvent exposure increasing the risk of people occupationally using solvents getting AML?

MR. ALLEN: Object to the form.

A. Well, benzene is a solvent. So a lot of these studies they were using benzene as a solvent. So yes, those studies support a link between that solvent and developing AML.

Q. (BY MR. STEWART) I asked a different question. I asked a question about whether or not studies that have looked at solvents in general, where they're not breaking out benzene, but looking at solvent exposure, do you believe that there is literature that shows that people who have worked with solvents, not specifically benzene, but articles that identify -- simply say "solvent," them having an increased risk of getting AML?

MR. ALLEN: Objection to form.

A. I can't think of any right now, but it wouldn't surprise me if there wasn't one or two.

Q. (BY MR. STEWART) So you think if they do exist, there's not more than one or two.

MR. ALLEN: Objection to form.

A. Well, I can't think of any.

Q. (BY MR. STEWART) So I take it, as you sit here, what you're saying is you're not aware of any articles that support the idea that people who have occupational exposure to solvents -- and I point out here these are articles that don't specifically

nominate benzene -- that you're not aware of any articles that show that occupational exposure to solvents increases the risk of getting AML. Have I stated that accurately?

MR. ALLEN: Objection to form.

A. Well, I mean, it's purely semantic. But the way I interpret your question, because you specifically said they did not break out individual solvents like benzene, so all I was thinking about were what studies where they didn't say anything about toluene or naphthas or anything else, and just used the general term solvent -- is that what you're asking me?

Q. (BY MR. STEWART) I understand. And thank you for that. That helps me craft a better question. Are you aware of any study that looked at occupational exposure to solvents where the authors concluded occupational exposure to solvents increased the risk of AML? And I am separating out of that studies that were looking specifically at benzene exposure.

MR. ALLEN: Objection to form.

A. I'll try to answer it. Not toluene, not VM&P naphthas, just the word solvent. Not things that I know were solvents, but just the word solvent as a general category with no specificity attached. That's what you're asking, right?

Q. Yes. For this question, that is what I'm asking.

A. Okay. No, I can't think of any where they have used the word solvent and found an increased risk of AML.

Q. Now, are you aware of any studies where naphtha has been looked at that there has been a report or finding that occupational exposure to naphtha increases the risk of leukemia?

MS. SCATES: Objection to form.

A. No.

Q. (BY MR. STEWART) Are you aware of any studies where occupational exposure to toluene as a solvent increased the risk of leukemia?

MR. ALLEN: Objection to form.

A. I think the Adegoke study from 2003 had something -- some kind of fuzzy funding that could be used to support that.

Q. (BY MR. STEWART) Other than that study, are you aware of any other study?

MR. ALLEN: Objection to form.

A. That specifically focused on toluene, no.

Q. (BY MR. STEWART) All right. Now, in connection with your opinions as relates to naphtha and toluene, mineral spirits, you mentioned, please tell me

the articles you are relying on for the proposition that exposure to -- occupational exposure to those substances do not increase the risk of getting leukemia.

MR. ALLEN: Object to the form.

A. I'm assuming you want me to limit it to the list.

Q. (BY MR. STEWART) I do, the list that you provided me prior to this deposition, that's correct.

A. Okay. I think there's some evidence in Adegoke, 2003. Layman, 2006. Marsh, 2004. Walker, 1993. Wong, 2010. Bethwaite, 1990. Berlin, 1995. Blair, 2000.

Bacardi, 2002. Brown, 2002. Cartwright, '88. Chen, '98. Chen, '99. Chiaza, 1980. Costantini, 2001. Decoufle -- oh, no. Scratch that.

Flodin '86. Guberon, '89. Ji, 2005. Li, 1994. Lundburg, '98. Manatowski, '86. Melay, '94. Morgan, '81. Steinland, '98. Wong, 2010. I think those are the ones on my list.

Q. (BY MR. STEWART) Okay. So I'm clear, you've listed for me everything in the Reliance Materials that you will be relying on to support your opinions that you just provided for little sub i, right? I'm getting ready to go to double ii and I want

to make sure we've completed little i.

MR. ALLEN: Objection to form.

A. What you were asking me were studies on this reliance list that support my opinions that solvents like toluene and other things like that, there is no increased risk of AML.

Q. (BY MR. STEWART) Excellent point. You're absolutely right. That was the last question on the table. Have you done that?

A. Yes.

Q. Okay. Now, in connection with little i on the -- I want to know if you've given me all the specific opinions that you think you will be giving in this case that relate to small little i?

A. I think the one I gave you was sufficient.

Q. All right. And now have you provided to me all of the articles that support that opinion that are on the list that you provided previously?

A. No.

Q. Okay. Why don't you tell me the additional matters or things that are on the list that support those opinions.

A. ACGIH documentation for toluene, the ATSDR profile for Stoddard solvents and for toluene. Those two are the same. ATSDR and Toluene Health Effects and

Regulatory is one document.

The IARC volume on toluene, the IARC Volume 47, which is on solvents. I think that will do it.

Q. Okay. Thank you. So now have we covered all the materials and opinions that you will be providing -- or materials that support the opinions you will be providing with respect to sub little i in that paragraph on page 5 of Berryman's Supplemental Designation of Expert Witnesses?

A. I guess that will depend on whether or not I have to rely solely on this list because, as I pointed out at the beginning, the gasoline literature, I think, supports that opinion as well, and that will be an additional 20 or 25 studies that would fall into that category. But maybe that's something the court is going to have to decide.

Q. You're probably right. That's going to be something that someone who is a higher authority than anybody on the phone is probably going to have to weigh in on.

So leaving those aside, have we now covered all the articles that support the opinions that you will be providing in subpart i there?

A. Yes.

Q. Okay. Let's go to double little ii, and it says "the diseases which have been associated with exposure to the chemicals alleged to be relevant to this case." And let me just ask you this question; have you seen any evidence that Mr. Khieu does not have AML?

A. No.

Q. All right. Would you agree that all the evidence supports Mr. Khieu having AML?

MR. ALLEN: Objection to form.

A. Well, I think all the evidence points to he had it. Whether he still has it or not, I think that's a medical opinion.

Q. (BY MR. STEWART) I'm not asking for medical opinions. You would agree that Mr. Khieu has had the disease AML?

A. Yes.

Q. All right. Now, in connection with subpoint double little ii there, I want to just focus our attention on AML. And in connection with AML, you agree that benzene in sufficient doses can cause AML, yes?

A. Yes.

Q. Now, what other opinions -- if we are in agreement that AML is the disease of issue in this case

and that benzene can cause AML, what other opinions would you be providing with respect to double little ii?

MR. ALLEN: Objection to form.

A. Well, I think the literature would be pretty similar to what was in the first -- the single little i because the literature talking about the toxicological effects of toluene and naphthas and all these other solvents would also be part and parcel to my opinions that the things that he was exposed to -- Mr. Khieu was exposed to -- did not give him AML. So that would fit into this one as well as the first one.

Q. Do you think that being exposed to either naphtha, mineral spirits or toluene in sufficient concentrations can ever cause AML?

MS. SCATES: Objection to form.

A. I haven't seen any evidence that that's the case. And you can --

Q. (BY MR. STEWART) Your opinion is no --

A. Well, you can make some pretty strong pharmacokinetic arguments that it couldn't possibly happen, but I haven't seen any evidence that that's the case.

Q. Okay. I must confess, I'm not really sure what you said there. So let me ask a different

question. My question is, are you of the opinion that no amount of exposure to either mineral spirits, naphtha or toluene could ever cause leukemia?

MR. ALLEN: Objection. Form.

A. My opinion is that there is no scientific evidence to support that that has ever occurred that I'm familiar with.

Q. (BY MR. STEWART) So is it your opinion that the benzene concentrations that are in toluene, mineral spirits and naphtha could never be high enough or sufficient enough for the benzene contained in those materials to cause AML?

MR. ALLEN: Objection to form.

A. I think that's what the scientific literature would support. So yes, that would be my opinion based on the existing scientific evidence.

Q. (BY MR. STEWART) Now, you would agree that the benzene in toluene and the benzene in naphtha and mineral spirits, if a person is exposed to enough of that benzene, can cause AML, true?

MS. SCATES: Objection. Form.

A. Well, I'll answer this way and you'll probably have a follow-up. I don't believe that there is any difference in a molecule of benzene that a person would inhale from pure benzene as opposed to a

molecule of benzene that a person may inhale from using toluene.

So from a metabolic and a chemical point of view, I don't believe that there would be a difference internally between those two molecules.

But in order to get sufficient exposure to benzene to meaningfully increase one's risk of AML from say mineral spirits, they're going to be exposed to so much else from the mineral spirits that I'm not positive that that's even compatible with being alive. So I don't know that someone could ever be exposed to enough benzene to give them AML from mineral spirits.

Q. (BY MR. STEWART) So are you going to be opining in this case that it's impossible for someone to have the -- a sufficient exposure to toluene to get AML from the benzene in the toluene or the mineral spirits or the naphtha because a person would die before that would happen from asphyxiation or something else?

MR. ALLEN: Objection to form.

A. Well, what I said was that there's going to be concurrent exposures to these other chemicals that are likely to have toxicity, and it could be past the level that would be immediately dangerous to life and health. Whether they would die or not --

Q. (BY MR. STEWART) I'm sorry.
A. Whether they would die or not, I don't know the answer to that. But with the levels that are in toluene and mineral spirits and things now, I think it would be very difficult to achieve the levels of benzene that have been shown to cause AML.
Q. All right. Let me object to the nonresponsiveness of that. And Doctor, and I apologize. I did not mean to interrupt you beforehand. So let me ask my question a different way.
A. Okay.
Q. Are you going to be coming to court and rendering an opinion that the amount of exposure that Mr. Khieu would have to have to either toluene products or naphtha and mineral spirits products would be so high for him to have a sufficient benzene dose from these products, that he would have other demonstrable physiological effects that he did not have?
A. I will opine that that is entirely likely, yes.
Q. Okay. And what is the evidence that you are going to be pointing to for that support?
A. The levels of toluene that he would have to achieve and what we know about the toxicological effects of those levels of toluene.

Q. And have you done that calculation?
A. Roughly.
Q. Okay. Well, in one of the Subpoena Duces Tecum categories you were asked for any calculations, that kind of thing that you did, and I thought you told me earlier in connection with that, that that didn't apply?
A. That's fair. The only calculation -- and I didn't really even do it other than just check to see if I agreed -- was the one John Spencer did where if a person was exposed to 57 ppm benzene, what would be the concurrent exposures to toluene? So the calculation was done in John Spencer's report or comments or whatever he has.
Q. Okay. So if I understand you, you're saying you didn't do your own calculations, but you looked at Spencer's and you agreed with him; is that right?
A. Yes.
Q. Okay. And what are the physical manifestations that you would expect or you're planning to come to court to testify about that Mr. Khieu should have had if he had that level of exposure to toluene, naphtha, mineral spirits, those sort of things in order to have a sufficient benzene dose to cause AML?

A. I would have to go back and check in the ATSDR in some of the toluene profiles, but sitting here right now, I don't think that he could maintain consciousness. I think he would be unconscious.

Q. Okay. Besides him being unconscious, can you think of anything else?

A. That would be the one that I would present to the jury.

Q. All right. Now, are there documented cases in the literature of people becoming unconscious after being exposed to naphtha, mineral spirits or toluene?

A. It's a standard established toxicological characteristic of all organic solvents, so yes. For sure there are.

Q. And are you of the opinion that even if someone became unconscious after being exposed to toluene, naphtha or mineral spirits, they still wouldn't have a sufficient dose of benzene to cause AML?

MR. ALLEN: Objection to form.

A. You mean if they passed out and just laid in the room for 40 years? I guess I don't understand your question.

Q. (BY MR. STEWART) That's not what I mean

at all. I'm asking you are you of the opinion that if someone has a sufficient dose of exposure to toluene, naphthalene or mineral spirits such that they pass out from that exposure, would you still consider that exposure an insufficient benzene exposure to contribute to causing AML?

MR. ALLEN: Objection to form.

A. What do you mean by "contribute"?

Q. (BY MR. STEWART) Play a role in.

A. I can't answer that. I mean, if a person's cumulative exposure to benzene were sufficient from all sources to increase their risk of AML and they had one acute example or episode like what you just described where they were exposed to toluene to the point where they passed out and they had concurrent benzene exposure because of that, but they had enough cumulative exposure to get AML, then yes, it would have contributed.

But what you're asking me is, is that in and of itself sufficient to give a person AML -- I think that's what you're asking -- and the answer to that is the loss of consciousness is an acute effect, that leukemia development is not an acute side effect of benzene. That occurs from long term chronic exposure.

So even in if a person passed out in the workplace because of toluene and they were exposed to the associated levels of benzene, no, that would not give a person leukemia.

Q. Okay. So I'm clear, what I think I just heard you say is if -- benzene exposure that someone had from working with toluene or mineral spirits or naphtha, if that benzene exposure was added into -- accumulated into a person's other benzene exposures and that accumulation of those benzene exposures ended up being sufficient to be enough of a benzene exposure to cause AML, then you would say that benzene exposure from mineral spirits, naphtha, toluene contributed to that exposure, true?

MR. ALLEN: Objection. Form.

A. That's a fairly convoluted question, but I wouldn't know how you could separate those out. So yes, I would think that it made whatever contribution it made to his overall exposure.

Q. (BY MR. STEWART) Okay. And you would be including that in the exposure because of the benzene in those products, right?

MR. ALLEN: Objection. Form.

A. Right. Yes.

Q. (BY MR. STEWART) Okay. Now, in

connection with -- we were on double ii, "diseases which have been associated with exposure to chemicals alleged to be relevant in this case," and I want to make sure that I've given you the opportunity to list any other articles that were on your list that might pertain to this issue that you haven't already mentioned.

A. We're on --

Q. Double little ii.

A. Can we just call them like 1 and 2 and 3?

Q. That's fine with me.

A. So we're on 2?

Q. Yes.

A. Yes, I think we've talked about 2.

Q. All right. Let's go to No. 3, "the levels and duration of exposure which have been associated with Mr. Khieu's alleged disease and AML."

Now, I know we've talked about this a little bit and I want to know if you have anything in addition to add to our previous conversation about what you believe the levels are and duration of exposure needs to be for AML to be related to benzene exposure.

A. No, I think we were pretty clear on that.

Q. Okay. All right. So if I understand you correctly, for level 3 -- and I -- essentially, you

recall me asking you to name articles from the year 2000 and forward and then the year 1990 to 1999. You recall that, right?

A. Yes.

Q. Okay. Now I'm going to give you the opportunity -- and you don't have to repeat the ones that you've already said from 1990 to 2010 -- what addition articles, if any, would you say are on your list that support your opinions that you have given about the levels and duration that you believe need to be present before an AML can be related to benzene exposure?

A. Bond, '86 and '87. Ott, '85 and '89. Passe '89. Rinsky, '89. I think those would be the ones on this list.

Q. All right. Now, in connection with the subject of the levels and duration of exposure associated with Mr. Khieu's disease and the relationship between AML, I'm wondering -- excuse me -- I'm wondering if you believe that an exposure of 30 ppm years -- if someone has an occupational exposure to 30 ppm years of benzene and it's documented and that person ends up having AML, whether or not that is sufficient to be considered to be related to benzene exposure more likely than not?

A. I can't answer that. The only way to evaluate that kind of quantitative cutoff is what the epidemiological evidence supports, and that seems to support a lower bound of about 40 ppm years.

So based on the quantitative epi, no, 30 ppm years would not be sufficient. And you've also got to include when those exposures occurred, whether they occurred within 10 years prior to diagnosis or whether they were 45 years ago prior to diagnosis. That would also be an important consideration.

Q. So I take it that it's your opinion that if a person has 30 ppm years worth of exposure to benzene five years before they get AML, that that would be insufficient to say that benzene more likely than not contributed to cause the AML, correct?

A. That's a hard question to answer. I mean, I would say that the epidemiological evidence would not support that. A five-year exposure ending up being a 30 ppm year within five years, I would be interested in what the disease looked like.

But no, I don't believe that I would be able to take a position and say more likely than not that was not caused by benzene. That would be a hard one for me to testify in.

Q. Why would that be a hard one for you to

testify in?

A. Because 30 ppm years is a substantial exposure to benzene, and within five years, I can't imagine how that could have happened. But if it did, then the temporal relationship would fit.

And that would just be hard for me to say that it absolutely wasn't the benzene that caused that person's disease.

Q. I understand. And you understand that the -- or do you understand that the level is just more likely than not, right?

A. Yeah, you're right. So scratch that. More likely than not, I don't know. I'd would have to think about it. I'd be on the cusp. I wouldn't be very comfortable with that situation. But I might still say this is more likely than not that it wasn't based upon the quantitative epi.

Q. If I understand what you're saying, once you heard the circumstances of the case -- what I just laid out for you -- there could be circumstances where you'd say, well, even though there's not something in the literature that fits precisely with this, the facts that you have laid out make it plausible that these two things are related to one another, right?

MR. ALLEN: Objection to form.

A. I would be -- me, personally -- I would be hard pressed to rule that out, but whether it's more likely than not, I would have to think about that. I don't have an answer to that sitting here right now.

Q. (BY MR. STEWART) Okay. Now, with respect to No. 3, I think we've covered what your opinions are in this case about the levels and duration of exposure that are required to relate an AML to benzene exposure, and I think we've covered all the literature that you believe that you put on your list that supports that. But I want to give you an opportunity to add anything, if you feel the need to, at this point on that subject. Is there anything you need to add?

A. No. We can move on.

Q. Okay. So now we're at 4, "the causal relationship or lack thereof between Mr. Khieu's disease and resulting medical and psychological condition and his occupational exposures to defendant's products or other solvents and chemicals which Mr. Khieu contends he encountered in the workplace." Now, what are going to be your specific opinions on that point, sir?

A. I guess I don't really see how that's any different than what we've talked about. I guess the specific difference would be the Rust-Oleum paint

thinners or the Berryman B-12 product.

But from a toxicological point of view, I don't think about those in terms of Rust-Oleum or Berryman, but what those products are composed of.

And then we're back to, well, what does the literature tell us about the toluene and mineral spirits and acetones and these other things. So from that standpoint, I mean, I think it has the defendant's product in that No. 4, but I don't think the literature would be any different than it would be for No. 1 or No. 2 really.

And the psychological condition, I don't really know what that means, so I wouldn't have an opinion about that at all.

Q. Do you have an opinion as to what caused Mr. Khieu's AML?

A. I don't believe it's known. So if that's an opinion, then yes, I have an opinion, that it was de novo idiopathic. But I couldn't tell you why he developed AML, no.

Q. And if I understand you correctly, what you're saying is you're not going to come and say you know what caused Mr. Khieu's AML, right?

A. I will not say that, no.

Q. And you're going to come and have the

opinion that no one knows what caused his AML, right?

A. That's true, yes.

Q. Now, do you believe it's unreasonable for a medical doctor to look at Mr. Khieu's circumstances, his exposures, and reach the conclusion that in the medical doctor's opinion, Mr. Khieu's AML was more than likely than not contributed to by his occupational exposure to solvents?

MR. ALLEN: Objection to form.

A. Do I believe it's unreasonable?

Q. (BY MR. STEWART) Yes.

A. I believe it's incorrect.

Q. I didn't ask that.

A. Okay. All right. Yeah, I think that's unreasonable. I think that's not supportable by science. It's not supportable by the epidemiology. It's not a reasonable conclusion to draw looking at Mr. Khieu's work history and what he was using as well as the characteristics of his disease.

Q. So any medical doctor who opines such an thing in your opinion is being unreasonable; is that right?

MR. ALLEN: Objection to form.

A. Well, I think any medical doctor that opines that his disease was more likely than not caused

by his occupational exposure to Berryman and Rust-Oleum products, that opinion is unreasonable.

Q. (BY MR. STEWART) Okay. Well, what if their opinion is that the benzene within the Rust-Oleum and the Berryman products contributed to cause his AML, is your opinion still the same?

MR. ALLEN: Object to form.

A. No. No, because now we're back to the situation where if a person had a cumulative exposure to benzene of sufficient quantity and duration and timing to where it did in fact increase their risk of AML, then anything that was contributing to that cumulative exposure would be contributing to the risk. So no, in that case I wouldn't consider that to be unreasonable.

Q. (BY MR. STEWART) All right. And so if a medical doctor reached the conclusion that the benzene that was contained in the Rust-Oleum products and the Berryman products contributed to Mr. Khieu's AML because it contributed to his overall benzene dose, would you find that unreasonable?

MR. ALLEN: Objection to form.

A. Well, it depends on what the benzene -- cumulative benzene dose for Mr. Khieu was. I mean, the overall cumulative exposure to Mr. Khieu, say, it's

1 1 1/2 or 2 part per million years, yes, I think it
2 would be unreasonable for someone to say 2 ppm years,
3 that's enough to have given him AML, so Rust-Oleum and
4 Berryman may have contributed to that.
5 However, if his exposures were 200 ppm
6 years, I think you would have to go back and say, well,
7 where did he get that? And the relative contribution
8 that every product or exposure that he experienced
9 would be part of that cumulative exposure.
10 But I haven't seen any evidence that his
11 exposures were -- I haven't seen any evidence that
12 that's the case.
13 Q. (BY MR. STEWART) That's not actually
14 accurate is it, Doctor? I mean, you did review some of
15 the plaintiff's materials, correct?
16 A. Well -- which one are you talking about?
17 Q. And what you just said is you haven't seen
18 any evidence of that. You've seen evidence, you just
19 don't agree with it, right?
20 MR. ALLEN: Objection --
21 A. Are you talking about Dr. Kopstein --
22 Q. (BY MR. STEWART) Yes.
23 A. Yes, that's true.
24 Q. All right. So you have seen evidence, you
25 just disagree with that evidence about what the

cumulative benzene dose was for Mr. Khieu, correct?

A. Well, I believe that's stretching it calling it evidence. I have seen Dr. Kopstein's estimates, which I don't believe are realistic.

Q. Okay. So your opinion is what Mr. Kopstein has come up with isn't even sufficient to call it evidence in your opinion, correct?

A. I would agree with that.

Q. You would agree with that?

A. Yes.

Q. And are you capable of doing -- are you qualified to do those sort of calculations yourself.

MR. ALLEN: Objection to form.

A. I'm a toxicologist and toxicologists have been forever interested in dose response relationships. So certainly I'm capable of doing it. In a litigation context like this, I will rely on people with expertise in industrial hygiene to do that. So I will not been rendering an opinion on what Mr. Khieu's cumulative exposures were.

Q. (BY MR. STEWART) Except to say that you don't believe Kopstein's estimate, right?

A. That's true.

Q. And so we're clear, you haven't done an estimate of your own, correct?

A. No.

Q. Now, in connection with No. 4, which we were on, I thought I understood -- and let me get that in front of me -- I thought I understood you to say that the reliance materials really aren't different in 4 from what you've mentioned previously and the question to you really was knocked around on this issue of specific to the defendant's products, but that's not really germane for you because you're just interested in the chemicals in the products themselves, not product's name, right?

A. Yeah, I think that last part is accurate. I mean, I think the MSDS sheets and all the information we know about what the products had in them is certainly germane. And that would fit into what John Spencer is evaluating.

But yes, from a toxicological point of view, Rust-Oleum paint thinner doesn't tell you anything about what the toxicity is going to be of that product. You're going to have to look to see what's in Rust-Oleum paint thinner and understand the toxicity of those individual constituents.

Q. Okay. So anything beyond what you've already listed on your -- or spoken about in this deposition -- that isn't in your reliance materials

that you would be looking at to render opinions on No. 4?

A. I can't think of any, no.

Q. Okay. Let's move to No. 5, which says "the causal relationship or lack thereof between AML and alleged occupational exposures to defendant's products or other solvents and chemicals which Mr. Khieu contends he encountered in the workplace."

I will tell you this is my interpretation and you tell me if you disagree, and if you do, we'll follow up on it. But it sounds to me like 5 is a summary of everything that's happened in 1 through 4, and it wouldn't be any different than what you've already talked about, but you tell me if I'm wrong.

A. No, I would agree with that. Yes, I think that's fair.

Q. Okay. Now, Dr. Pyatt, I would like to ask your opinions just generally on cytogenetics. Do you believe that AMLs that are related to benzene exposure are only those AMLs that have cytogenetic changes?

A. No, I wouldn't say that it's impossible to have an AML be related to benzene that does not have cytogenetic changes. So the "only" part I would say no it's not a hundred percent one way or the other.

Q. Okay. And would you agree that Mr. Khieu

has an AML that if he had a sufficient dose of benzene exposure, it's the kind of AML that could be related to benzene exposure?

A. Well, I think the cumulative exposure part is the most important aspect of that causation analysis. If he had sufficient exposure of benzene to give him AML, what I will say is that the characteristic pathologic clinical characteristics of Mr. Khieu's disease are completely inconsistent with what our understanding of what a benzene related AML might look like.

But I could not say purely based on those characteristics that no, it could not possibly have been benzene at any dose.

Q. And to put that differently, it would be your opinion, would it not, that if Mr. Khieu had a 40 ppm year dose of benzene to your satisfaction and he later developed the AML that he has with his presentation, that more likely than not you would say that his AML was contributed to by his benzene exposure, right?

A. I think I would have to allow that, yes, with the caveat that it was certainly a very unusual or inconsistent presentation from what we would expect, but I couldn't rule it out.

Q. And because of that, you would say more likely than not it was an AML that was related to that occupational benzene exposure, right?

A. That's the -- more likely than not, I don't know. I would have to think about that. I would say that I couldn't rule out the benzene. But the fact that it is so inconsistent and it would depend on when those exposures occurred, I'm not sure how that would all fall out.

But I mean, I think the answer to your question is those characteristics are not definitive enough for me to say absolutely it could not have been a benzene related disease. But they are very inconsistent with what we think a benzene related AML might look like.

Q. Well, let's assume that Mr. Khieu had 40 ppm years worth of benzene exposure occupationally 15 years before he was diagnosed with this disease and then he is diagnosed with his AML.

Based on those facts alone, Dr. Pyatt, wouldn't you say that more than likely than not that AML had been contributed to by his previous 15 years of benzene exposure?

A. No. I wouldn't say more likely than not. I would say that I couldn't rule it out that it may

have caused it. But if you have more likely than not, what's that, like 51 percent?

If you have a hundred people that have that exact profile, are you going to have 51 cases of AML? And the answer to that is no, you're not. We know that. You're not going to have anywhere close to that many at that exposure level.

So no, I would not say more likely than not that's what caused his disease. But I would say I can't rule it out that benzene did it.

Q. If I understand you correctly, what more likely than not means to you is that before you're willing to say that in the scenario I just gave you that something is more likely true than not true, that there would have to be a hundred people who were exposed in the manner that I just described and 51 of those people come up with AML, right?

A. Isn't that what more likely than not would mean?

Q. Is that what you think more likely than not means, Doctor?

A. I don't know. I just don't think like that. I don't know what more likely than not -- other than just a pure probability standpoint -- what that would tell me. So I'm sticking by my original answer.

No, I would not say it's more likely than not or less likely than not. I would say that I could not rule benzene out as a contributing factor.

Q. Have you ever testified in any case that benzene more likely than not caused AML in a case that you were testifying in?

A. No.

Q. Let's turn to another matter and I will tell you that I think I'm almost done. So for planning purposes, if you're wanting to have a break, bear with me because I think I'm almost about done.

A. Whatever you want to do is fine with me, but go ahead.

Q. Okay. Perfect. I want to turn to the amount of money that you have received doing this kind of work. And when I define "this kind of work," Dr. Pyatt, what I'm talking about is doing litigation work.

And I want to do it year-by-year, and I think it will probably be easier since we're only dealing with the time period of 2006 to present, am I right?

A. Well, that's when I started giving depositions, but I probably did some litigation work in 2005 and maybe even a little in 2004 where it just

never went far enough to give a deposition.

So no, I don't think it would be fair to draw a line and say I never made any money prior to '06.

Q. Okay. And I appreciate you pointing that out. Let's do this -- I want to work backwards -- so let's deal with this year. We are in July of 2010. Please give me your best estimate of the amount of monies you have received or bills that you have sent out for the year 2010 related to doing litigation work as an expert.

MR. ALLEN: Object to form.

A. I can't do that. I mean, I read the depositions of Dr. Garabrant and Dr. Natelson and I could tell how important this was to you. So I did go back and look at my tax returns for 2009.

So I can give you pretty accurate numbers for 2009, but I don't have any summary kinds of data for 2010. So I can't tell you anything about 2010 today. So if you move back to 2009, I can answer your question.

Q. (BY MR. STEWART) Okay. Well, here's what I want you to do -- because I don't think people, when they're talking about their own money, need a document to look at -- I'm looking for your best estimate of

what you think that is up to right now in 2010.

MR. ALLEN: Objection to form.

A. I don't have a best estimate.

Q. (BY MR. STEWART) Is it a million dollars?

MR. ALLEN: Object to form.

A. No.

Q. (BY MR. STEWART) All right. So you can estimate that it's not a million dollars, true?

A. If I'd made a million dollars up to this point, I may not be having this conversation with you. But yeah, I can make that kind of gross estimation.

Q. All right. Is it $500,000?

MR. ALLEN: Object to form.

A. No.

Q. (BY MR. STEWART) All right. Is it $250,000?

MR. ALLEN: Object to form.

A. No.

Q. (BY MR. STEWART) All right. Do you think it's lower or higher than $250,000?

MR. ALLEN: Object to form.

A. Lower.

Q. (BY MR. STEWART) Is it a hundred thousand dollars?

MR. ALLEN: Object to form.

A. That's probably too high.
Q. (BY MR. STEWART) All right. $50,000.
MR. ALLEN: Object to form.
A. That's probably too high.
Q. (BY MR. STEWART) $20,000?
MR. ALLEN: Object to the form.
A. That's probably too low.
Q. (BY MR. STEWART) So it's your estimate that it would be somewhere between $25,000 and $50,000 for this year, 2010, to where we sit right now approximately?
MR. ALLEN: Object to the form.
A. Yeah, that I've made -- I'm guessing, but yes, guessing that I've made doing litigation work.
Q. (BY MR. STEWART) Well, you're not guessing, you're estimating, right?
MR. ALLEN: Object to the form.
A. Well, I'm doing the best I can.
Q. (BY MR. STEWART) That's all you are required to do.
A. I don't know the answer to your question, so I'm going along with you. If you want to call it an estimate, that's fine.
Q. (BY MR. STEWART) All right. So now we have an estimate for 2010 to date. Please share with

me the amount of money that you made doing this kind of work in 2009, your best estimate, please.

MR. ALLEN: Object to the form.

A. About 75 or 80,000.

Q. (BY MR. STEWART) Okay. And what is your best estimate of the amount of money that you made doing this kind of work in the year 2008?

MR. ALLEN: Object to form.

A. Probably about the same.

Q. (BY MR. STEWART) The same as 2009?

MR. ALLEN: Object to form.

A. Yes, 75 or 80,000.

Q. (BY MR. STEWART) All right. And then for the year 2007, can you please give me your best estimate of what you believe you made doing this kind of work in 2007.

MR. ALLEN: Object to form.

A. 60 -- 60,000. It was definitely less.

Q. (BY MR. STEWART) Okay. Let's go to the year 2006. What's your best estimate of the amount of money you made doing this kind of work in the year 2006?

MR. ALLEN: Object to form.

A. 50,000.

Q. (BY MR. STEWART) And then let's do 2005,

what would be your estimate of the amount of money that you made doing this kind of work in the year 2005?

MR. ALLEN: Object to the form.

A. Maybe the same. 50,000.

Q. (BY MR. STEWART) All right. 2004, which you sounded to me like if you were to guess when you started doing this sort of thing, maybe 2004; am I right about that?

A. Yeah, I -- I might have even done a little in 2003. I would have to look at my CV, but I worked at Kim Risk for a while and we did litigation stuff. I didn't make any money from it. I was just making a salary with Kim Risk. So I don't know how you would figure that out.

Q. (BY MR. STEWART) I would be asking the principles at Kim Risk what they made, but we're not going to do that today. So let's just go to 2004, what's your estimate of the amount of money that you made doing this kind of work in 2004?

MR. ALLEN: Object to form.

A. I'm going to guess 30 or 40,000.

Q. (BY MR. STEWART) All right. Now I know that you provided me with a list of your testimony. Am I right from that list that to date you have not ever come to trial and testified? I'm separating out trial

from hearing.

A. Yes, that's true. I have not ever testified in a trial.

Q. Okay. And in connection with the list that you provided to us, on that list point out to me, if you would, please, if there is anywhere in that list where you were testifying on behalf of someone other than a company. Is there any?

A. No. No, I haven't ever been asked by plaintiff's attorneys, so I haven't ever done work on that side of an issue.

Q. Okay. Now, in connection with your opinions and your testimony, what other experts have you spoken to in this case, if any?

A. None.

Q. All right. And what other experts' reports or opinions or whatever else you want to point to, besides the articles you've told me about, the scientific and medical literature articles, I'm interested in knowing what other materials from the defense experts that you have reviewed that you are going to be relying on for the opinions that you give in this case.

A. I've reviewed reports and depositions of all of the experts. The only thing that I'm going to

be relying on is the calculations and comments and expert opinion of John Spencer.

Q. Okay. And thank you for that distinction because you were getting to the part that I was interested in. Obviously, you reviewed a lot of stuff. I want to cut through that clutter and talk about the things that you're relying on.

And if I understand you correctly, what I hear you saying is of all of the things that you've been provided with by the experts in the case, the only things that you're going to be relying on is the work that was done by John Spencer. Am I right?

A. Yes.

MR. STEWART: Dr. Pyatt, I think those are all the questions I've got at this time. Thank you for your patience. Jeff and Nancy might have other questions, but I think I'm done.

MR. ALLEN: I'm going to reserve my questions for trial, Al. I'm going to remind you that I've got in front of me -- since you're here, it's only fair to mention it -- it's a handwritten note that Dr. Pyatt referenced earlier on in his testimony.

It's basically just a one-pager that kind ever sets out a handwritten synopsis of what his opinions are. You want to attach it as an exhibit and

ask him about it?

MR. STEWART: You can attach it as an exhibit. I'm not going to ask him about it because I don't have it in front of me.

MR. ALLEN: Okay. Fair enough. I just want you to know it's here.

MR. STEWART: I completely understand that he brought it with him and it's handwritten and it can be attached. I'm fine with that, but I don't want to ask him about it at this point. I would probably have to digest what's in it, which I'm not prepared to do at this point. But having said that, go ahead and attach it.

And while we're talking about that, Jeff, I know that, Dr. Pyatt, you had mentioned you brought some statements with you. And I'll just say a reminder again, if we can just have copies of those statements and just append them as Pyatt next, that's fine.

MR. ALLEN: Okay. We'll do that next.

MR. STEWART: So those would be Pyatt 5.

MR. ALLEN: It's two pages. You want to do it as one or two? It's two separate invoices.

MR. STEWART: Just do it as one.

(Plaintiffs' Deposition Exhibit Nos. 5 and 6 were marked.)

MR. ALLEN: It's two pages. I'm sorry -- it's an invoice, one of them is dated April 1st, 2010, addressed to Andrew Schirrmeister. That may or may not have been provided to you previously. The second page is going to be an invoice dated June 1st, 2010. That's addressed to me, Jeff Allen. That was produced to you along with some correspondence, I believe. So we're attaching that as one exhibit, Pyatt Exhibit 5.

MR. STEWART: Right.

MR. ALLEN: And we will attach -- I'm just going to go ahead and attach as Exhibit 6 -- so we have it in the record -- the handwritten note that Dr. Pyatt brought to the deposition today. I don't have any questions at this time. We'll reserve them for trial.

MR. STEWART: Jeff, can we do one other thing, if you've got them there with you, the e-mail stream that was that last entry -- do you know what I'm talking about?

MR. ALLEN: They got sent. They're somewhere here, I think. It was a fax --

MR. STEWART: Can you do me a favor -- because you have them listed with Bates numbers on them -- why don't you just stick a sticker on those or a copy of them and make that Pyatt 7. Now --

MR. ALLEN: Let me make sure it's here.

I'm not sure where it ended up.

MS. SCATES: Al, while he's looking for that, this is Nancy, and we're going to reserve our questions for trial as well.

(Discussion off the record.)

MR. STEWART: Pyatt 7, I believe, will be e-mail correspondence that is Bates numbered 002705 through 002750.

MR. ALLEN: What we'll do is we have that electronically and we'll e-mail it to the court reporter and she can add it as Exhibit 7.

MR. STEWART: That's fine.

MR. ALLEN: Okay. I think we're good.

MR. STEWART: Okay. Dr. Pyatt, thank you for your time.

THE DEPONENT: Thank you.

MR. ALLEN: Thanks, Al.

(Whereupon, the within proceedings were concluded at the approximate hour of 1:03 p.m. on July 16, 2010.)

STATE OF _____

COUNTY OF _____

Before me, this day, personally appeared DAVID W. PYATT, Ph.D., who, being duly sworn, states that the foregoing transcript of his/her deposition, taken in the matter on the date and at the time and place set out on the title page hereof, constitutes a true and accurate transcript of said deposition.

_____

DAVID W. PYATT, Ph.D.

SUBSCRIBED and SWORN to before me this _____ day of _____, 2010, in the jurisdiction aforesaid.

_____ _____

My Commission Expires Notary Public

REPORTER'S CERTIFICATE

I, Cyndi N. Erdmann, Professional Court Reporter, appointed to take the videotape deposition of DAVID W. PYATT, Ph.D., certify that before the deposition the deponent was duly sworn by me to testify to the truth; that the deposition was taken by me at 2660 Canyon Boulevard, Boulder, Colorado 80302, on July 16, 2010; then reduced to typewritten form consisting of 88 pages herein, that the foregoing is a true transcript of the questions asked, testimony given and proceedings had.

I further certify that I am not related to any party herein or their counsel and have no interest in the result of this litigation.

In witness hereof I have hereunto set my hand this 20th day of July, 2010.

_____

Cyndi N. Erdmann
Professional Court Reporter
and Notary Public
18 East Fountain
Colorado Springs, CO 80906

My commission expires January 22, 2012