

Job No. 9470

Scott & Rebecca Law v. Range Resources

Melanie Sattler

December 14, 2010



MERIT COURT REPORTERS
CERTIFIED SHORTHAND REPORTERS

**307 W. 7th Street, Suite 1350
Fort Worth, Texas 76102**

817-336-3042 * depos@merittexas.com

1 CAUSE NO. 236-236781-09
 2 SCOTT LAW and REBECCA LAW, § IN THE DISTRICT COURT
 3 Plaintiffs §
 4 v. § TARRANT COUNTY, TEXAS
 5 RANGE RESOURCES CORPORATION §
 6 AND RANGE TEXAS PRODUCTION, §
 7 LLC, §
 8 Defendants § 236TH JUDICIAL DISTRICT

9 ORAL AND VIDEOTAPED DEPOSITION OF
 10 MELANIE L. SATTLER
 11 Volume 1 of 1
 12 December 14, 2010

13 ORAL AND VIDEOTAPED DEPOSITION OF MELANIE L.
 14 SATTLER, produced as a witness at the instance of the
 15 DEFENDANTS, and duly sworn, was taken in the
 16 above-styled and numbered cause on December 14, 2010,
 17 from 9:12 a.m. to 2:39 p.m., before Gloria Carlin, CSR
 18 No. 498 in and for the State of Texas, reported by
 19 Stenographic method, at the offices of Harris, Finley
 20 & Bogle, PC, 777 Main Street, Suite 3600, Fort Worth,
 21 Texas, pursuant to the Texas Rules of Civil Procedure,
 22 Notice, Subpoena, and any provisions stated on the
 23 record.
 24
 25 Job No. 9470

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1 A P P E A R A N C E S
 2 FOR THE PLAINTIFFS:
 3 Jason C.N. Smith, Esq.
 4 LAW OFFICES OF ART BRENDER
 5 600 Eighth Avenue
 6 Fort Worth, Texas 76104
 7 817.334.0171
 8 jasons@artbrender.com

9 FOR THE DEFENDANTS:
 10 Andrew D. Sims, Esq.
 11 Troy D. Okruhlik, Esq.
 12 HARRIS, FINLEY & BOGLE, P.C.
 13 777 Main Street, Suite 3600
 14 Fort Worth, Texas 76102-5341
 15 817.870.8700
 16 asims@hfblaw.com
 17 tokruhlik@hfblaw.com

18 ALSO PRESENT:
 19 Mark Hansen
 20 David Crenshaw, Videographer
 21 M/S MEDIA
 22 1301 Sinclair Building
 23 512 Main Street
 24 Fort Worth, Texas 76102
 25 Phone: 817-332-5141
 E-Mail: gsimons1@sbcglobal.net

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14	None

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1 BY MR. SIMS:
2 Q. Would you please state your full name for
3 the ladies and gentlemen in the jury.
4 **A. Professionally I go by Melanie Sattler,
5 Melanie L. Sattler. On my driver's license my name is
6 Melanie L. Sattler-Dennis.**
7 Q. What is your address?
8 **A. You mean salutation or --**
9 Q. Your home --
10 **A. -- work address or --**
11 Q. Your home address.
12 **A. Home address. 2914 Mistletoe Court in
13 Pantego, Texas. And the ZIP is 76013.**
14 Q. What is your work address?
15 **A. 416 Yates Street, Suite 425, Nedderman Hall,
16 N-E-D-D-E-R-M-A-N, at UT Arlington, Civil Engineering
17 Department, Arlington, Texas 76019.**
18 Q. Are you employed by the University of Texas
19 at Arlington?
20 **A. Yes.**
21 Q. What is your position with the University of
22 Texas at Arlington?
23 **A. Associate Professor in the Department of
24 Civil Engineering.**
25 Q. Do you have a Ph.D. degree?

1 THE VIDEOGRAPHER: We're on the record.
2 Today's date is December the 14th,
3 2010. The time is 9:12. This is the videotaped
4 deposition of Dr. Melanie L. Sattler in a case styled
5 Scott Law and Rebecca Law versus Range Resources
6 Corporation, et al.
7 At this time, Counsel, please state
8 your appearances for the record.
9 MR. SIMS: Andy Sims here for Range
10 Resources.
11 MR. SMITH: Jason Smith here for the
12 Laws.
13 THE REPORTER: Pursuant to the Texas
14 Rules of Civil Procedure?
15 MR. SIMS: Yes.
16 MR. SMITH: Yes.
17 THE REPORTER: Would you raise your
18 right hand, please.
19 Do you solemnly swear or affirm to tell
20 the truth, the whole truth and nothing but the truth?
21 THE WITNESS: Yes.
22 THE REPORTER: Thank you.
23 MELANIE L. SATTLER,
24 having been first duly sworn, testified as follows:
25 EXAMINATION

1 **A. Yes.**
2 Q. For this deposition, will it be all right
3 with you if I refer to you as Dr. Sattler?
4 **A. Yes.**
5 Q. Dr. Sattler, have you ever given a
6 deposition before today?
7 **A. No.**
8 Q. Have you ever testified in any court
9 proceeding before today?
10 **A. No.**
11 Q. You understand today that you have given an
12 oath to tell the truth throughout the deposition
13 today?
14 **A. Yes.**
15 Q. And I noticed that on some of my questions,
16 you -- you tend to nod your head, but for the record
17 today we need you to answer audibly, with either a
18 "yes" or a "no" or some other answer; all right?
19 **A. Okay.**
20 Q. And, if you will, please let me ask my
21 question and stop the question, and then you give your
22 answer, and I'll try not to interrupt your answer
23 or -- as you're speaking; all right?
24 **A. Okay.**
25 Q. How long have you been a professor at

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1 University of Texas at Arlington?
2 **A. Full time since January of 2003, but I**
3 **started there as an adjunct in fall of '98.**
4 Q. As a professor at the University of Texas at
5 Arlington, are you concerned with intellectual
6 honesty?
7 **A. Yes.**
8 Q. Is intellectual honesty something that you
9 strive to achieve in the work that you do?
10 **A. Yes.**
11 Q. Is intellectual honesty something that you
12 demand of the students that you have at the University
13 of Texas at Arlington?
14 **A. Yes. We actually have a form that the**
15 **students sign at the beginning of every semester for**
16 **every class, provided by the College of Engineering,**
17 **that states that they're not going to engage in**
18 **cheating or collusion or plagiarism. So it's**
19 **something that's important not only to me, but also to**
20 **the College of Engineering and the University.**
21 Q. Is it important for you, as a professor at
22 the University of Texas at Arlington, for your
23 colleagues and yourself not to misrepresent their
24 credentials?
25 **A. Yes.**

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1 Q. Is it a very serious matter when a colleague
2 misrepresents the credentials that they actually have?
3 **A. I suppose that it would be. I don't know of**
4 **any cases of that occurring.**
5 Q. What would happen, or what would be the
6 process if you or a colleague misrepresented their
7 credentials to the University of Texas at Arlington?
8 **A. I don't know. We've got a Handbook of**
9 **Operating Procedures on the Internet and there's**
10 **probably a procedure for that, but, like I said, I'm**
11 **not aware of that having occurred, so that's not**
12 **something I've read up on.**
13 Q. What would you do if you learned that one of
14 your students had misrepresented their credentials?
15 **A. I'm not aware of a case of that occurring**
16 **either. I'd have to -- like I said, I'm sure there's**
17 **some kind of policy the University has regarding that,**
18 **but I haven't looked at that.**
19 Q. Well, that would be a matter of serious
20 intellectual dishonesty, wouldn't it, if you -- if you
21 found out that a student had misrepresented their
22 credentials?
23 **A. Well, depending on what the -- the level of**
24 **it was.**
25 Q. Would it be serious to you if a student

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1 represented that they had a Ph.D. when in fact they
2 did not?
3 **A. It would depend on the circumstances of how**
4 **they were representing that. If they were a**
5 **candidate, it's pretty -- a lot of times our students**
6 **that are studying for a Ph.D., like in their e-mail**
7 **signature, will put something to the effect that**
8 **they're a Ph.D. candidate or ...**
9 Q. What if they didn't -- what if they didn't
10 put that they were a Ph.D. candidate, what if they
11 just outright represented that they had a Ph.D.?
12 **A. Well, that would be serious, but I don't**
13 **know of any instances of that occurring.**
14 Q. Well, if you learned that that had occurred,
15 what would you do?
16 **A. Well, like I said, I would have to know the**
17 **circumstances of the representation. It could have**
18 **been a misunderstanding. I can't say what I would do**
19 **without knowing the particulars of the situation.**
20 Q. Is there some sort of Ethics Committee or
21 Disciplinary Committee at the University of Texas at
22 Arlington that looks into instances of intellectual
23 dishonesty?
24 **A. Well, like I said, there probably is, but I**
25 **haven't -- the University has hundreds of pages in its**

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1 **Handbook of Operating Procedures, and I haven't read**
2 **in detail every page, and I go there if there's a**
3 **particular issue and I need to know what the policy is**
4 **on that issue. So if it's something that hasn't come**
5 **up, I haven't looked at it.**
6 Q. Have you read the University of Texas at
7 Arlington ethics policy?
8 **A. We do training on ethics every year.**
9 MR. SIMS: I'm going to object to the
10 responsiveness of your answer.
11 Q. (BY MR. SIMS) I asked you if you had read
12 the University of Texas at Arlington ethics policy.
13 **A. Okay. We do an online training every year.**
14 **I assume that there's an ethics policy in the Handbook**
15 **of Operating Procedures. I haven't dug that out and**
16 **read it. I've done the online training that's**
17 **required every year for faculty and, I assume, staff.**
18 Q. Is it unethical under the University of
19 Texas at Arlington ethics policy for a professor to
20 accept money from a student?
21 **A. No. Well, I guess it could be, depending on**
22 **the circumstances. If it was a -- the ethics policy**
23 **does cover gifts.**
24 Q. Have you ever received money from any of
25 your students at the University of Texas at Arlington?

1 A. Not just -- well, I know what you're getting
2 at. I've done some work for Wolf Eagle, but that was
3 not a gift. That was money for consulting services.

4 Q. Have you ever received money from any other
5 students?

6 A. No, I haven't -- well -- no. I did some
7 consulting for another student that worked for a
8 consulting firm, but actually I just didn't have time
9 to ever send him a bill. I was too busy.

10 Q. Have you ever received any sort of
11 permission from the University of Texas at Arlington
12 Board of Regents or any other group who is over -- who
13 is charged with oversight of making sure that the
14 ethics policies are followed in connection with your
15 work with this Wolf Eagle entity that you mentioned?

16 A. Now, what was the question again?

17 Q. Have you ever received permission from the
18 University of Texas at Arlington Board of Regents or
19 any other group or committee charged with oversight of
20 work that you've done for this Wolf Eagle entity that
21 you mentioned?

22 A. No, but part of our job is to work on
23 research and consulting type grants. And I've worked
24 on over 20 different projects, and it's not customary
25 to -- I mean, we don't have to go to the Board of

1 A. She took some of my classes.

2 Q. How many classes has she taken of yours?

3 A. Three formal classes and then some research
4 hours.

5 Q. Over what period of time has she taken these
6 classes from you?

7 A. From 2003 to present.

8 Q. Has it been from 2003 to the present that
9 you have been paid by this Wolf Eagle entity that
10 you've done consulting work for?

11 A. No. I didn't do any consulting work for
12 them until 2009. And it was actually at a loss to me,
13 just to tell you the truth, in terms of my hourly time
14 that I spent on these projects. The amount of money
15 was so small, like I said, it was actually a loss. I
16 did the projects more as a service.

17 Q. As a service to whom?

18 A. Her clients.

19 Q. How many projects have you performed for
20 Alisa Rich?

21 A. Three.

22 Q. And what were you paid in connection with
23 each of those projects?

24 A. \$1500, \$750 and \$750, which, again, in terms
25 of the amount of time I spent on the projects, I

1 Regents to receive approval. I mean, it's part of our
2 job, we just work on these projects all the time.

3 Q. You work on projects with students that you
4 get paid on all the time?

5 A. Yeah.

6 Q. What other students, other than Wolf Eagle,
7 do you get paid for?

8 MR. SMITH: Objection, form.

9 A. I haven't worked on a project that -- where
10 the student was with a consulting firm, but I work on
11 projects with grad students all the time. That's part
12 of my job.

13 Q. (BY MR. SIMS) But you don't get paid by
14 those grad students, do you?

15 A. No.

16 Q. Tell me about this Wolf Eagle entity that
17 you mentioned. What is that?

18 A. It's an environmental consulting firm.

19 Q. Who owns Wolf Eagle?

20 A. Alisa Rich.

21 Q. How do you spell that?

22 A. A-L-I-S-A, R-I-C-H.

23 Q. How long have you known Alisa Rich?

24 A. Since 2003.

25 Q. How did you meet Alisa Rich?

1 actually worked on them at a loss. So to say that she
2 was somehow bribing me or giving me money is not being
3 intellectually honest.

4 Q. Has anyone ever asserted that Alisa Rich has
5 bribed you?

6 A. You were kind of implying that.

7 Q. Is that your -- is that what you gather from
8 the questions I've asked so far?

9 A. Well, I performed legitimate engineering
10 work for that money, and like I said, it was at a loss
11 to me in terms of the amount of time I spent on the
12 project.

13 Q. Do you know whether the University of Texas
14 at Arlington ethics policy requires you to disclose
15 the sort of work that you've done for Alisa Rich?

16 A. I don't know, but it's on my résumé. I
17 haven't -- the project -- I don't think I've updated
18 my résumé to include the third one, but two of the
19 projects are listed on my résumé.

20 Q. Have you disclosed that the Wolf Eagle
21 entity on your résumé is owned by one of your
22 students?

23 A. No. That would be kind of odd to put on my
24 résumé. I've done work for other consulting firms,
25 and I don't put the owner on there.

1 Q. Have you ever disclosed to the other
2 students in your classroom that you're being paid by
3 one of the students in the class?

4 MR. SMITH: Objection, form.

5 A. **No, but, like I said, this is being paid for**
6 **dispersion modeling, engineering work, and it was**
7 **actually at a loss to me. I probably spent 40 hours**
8 **on each of these projects and, you know, I would**
9 **normally bill people a hundred dollars an hour. So**
10 **the work that I did on these projects was actually at**
11 **a loss. I did it as a service primarily to the**
12 **clients.**

13 **So to try to make a case that she was**
14 **paying me off and there was something wrong with it is**
15 **not intellectually honest.**

16 Q. (BY MR. SIMS) Do you sit on Alisa Rich's
17 Dissertation Committee?

18 A. Yes.

19 Q. Have you disclosed to anyone on that
20 Dissertation Committee that you have received payments
21 from Alisa Rich or her entity, Wolf Eagle?

22 MR. SMITH: Objection, form.

23 A. No.

24 Q. (BY MR. SIMS) How long have you been
25 serving on Alisa Rich's Dissertation Committee?

1 Q. When you say that she's going to look at the
2 data to try to come up with a correlation between
3 different measured compounds, what does -- what does
4 that mean?

5 A. **Run a statistical analysis to see whether**
6 **there are correlations in levels of compounds. So if**
7 **toluene concentration is higher in a compound -- or in**
8 **a sample, compared with xylene, look at the next**
9 **sample to see if the ratio of those two compounds was**
10 **similar.**

11 Q. How is this statistical analysis performed?

12 A. **Using regression software.**

13 Q. Is the idea behind this attempt to correlate
14 between different measured compounds to try to be able
15 to look at various compounds and try to determine
16 where they came from?

17 A. **Yeah. Different sources have different**
18 **chemical fingerprints in terms of the ratios of the**
19 **different chemicals that are present in the emissions**
20 **from that source. So if you look at emissions from**
21 **tailpipe of an unleaded automobile, the ratio of**
22 **toluene to xylene to -- or any other different**
23 **compounds, will have a pattern, a chemical**
24 **fingerprint. If you look at the ratios of the**
25 **compounds from a coal-fired power plant, it's going to**

1 A. **I'm her supervisor, so I've been serving as**
2 **her supervisor since she started at UTA.**

3 Q. What does that mean, you're -- you're her
4 supervisor?

5 A. **It means that I'm the head of her**
6 **Dissertation Committee.**

7 Q. Has she turned in a dissertation at this
8 point?

9 A. **A draft.**

10 Q. What is her dissertation about?

11 A. **Emissions from natural gas drilling**
12 **facilities.**

13 Q. Does she use or reference the natural gas
14 drilling facilities that she's actually done work for
15 or in connection with various clients in her
16 dissertation?

17 A. **She uses that data. I don't -- I don't --**
18 **she doesn't have the clients identified by name.**

19 Q. In what manner does she use the data?

20 A. **She's going to look at or in the midst of**
21 **looking at correlations between different measured**
22 **compounds, and then is going to do dispersion modeling**
23 **of some representative scenarios to try to come up**
24 **with setback distances that would be protective of**
25 **human health.**

1 **be a different set of ratios. You get a different**
2 **chemical fingerprint.**

3 Q. And is the data that's been collected data
4 that Alisa Rich has collected through being paid to
5 work on various projects?

6 A. **Some of it; some of it not.**

7 Q. What data --

8 A. **That -- we have had cases of other Ph.D.**
9 **students in her same program. The Environmental**
10 **Science program, it's very common for the grad**
11 **students to work full time while they're going to**
12 **school, and so we've had several other cases of**
13 **students working on projects that originated from**
14 **their work. So to imply that she's doing something**
15 **that is out of the ordinary or unethical there is just**
16 **not intellectually honest.**

17 Q. What -- what data has she collected that she
18 hasn't been paid for?

19 A. **Some of her canister data.**

20 Q. Do you know where it was collected or what
21 data she collected through canisters that she wasn't
22 paid for?

23 A. **I don't know specifically. I'd have to get**
24 **that information, but ...**

25 Q. Does she have the capability to test any

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1 data that she collects?
2 **A. What do you mean, test?**
3 Q. Do the actual air testing.
4 **A. What do you mean, do the air testing?**
5 Q. Does she have a laboratory that she can test
6 for the different chemical compounds in the air?
7 **A. No. She places the canisters in the field,**
8 **and then the canisters are taken back to a lab,**
9 **typically GD Air Testing, and they have a gas**
10 **chromatograph setup where they actually do the**
11 **analysis of the compounds.**
12 Q. So, to your knowledge, has she paid for the
13 air testing from GD Air Testing out of her own pocket
14 or have her clients paid for that air testing?
15 **A. That's part of the charge that she charges**
16 **to the clients.**
17 Q. I'm just asking you, do you know if she's
18 ever paid for any of that air testing out of her own
19 pocket?
20 **A. I don't know for sure, no.**
21 Q. So do you know if, in fact, she's done any
22 air testing that she hasn't actually been paid for?
23 **A. I believe that she has placed some canisters**
24 **just on her own, but, like I said, I don't know the**
25 **details of -- of where.**

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1 Q. Do you know for sure, or is that just
2 something you think? I mean, I'm asking you what you
3 know today.
4 **A. I don't know --**
5 MR. SMITH: Objection, form and
6 argumentative.
7 **A. I don't know absolutely for sure.**
8 Q. (BY MR. SIMS) Okay. If you will, if you
9 don't know, if you'll just tell us you don't know,
10 that would be preferable to guessing or speculating
11 today; okay?
12 **A. (Moving head up and down.)**
13 Q. Is that a yes?
14 **A. Okay.**
15 Q. Thank you.
16 I see that you brought some documents
17 with you today.
18 **A. (Moving head up and down.)**
19 Q. Is that yes?
20 **A. Yes.**
21 Q. And is that in response to the subpoena that
22 you were asked to bring documents with you?
23 **A. Yes.**
24 Q. All right. Can you -- would you provide for
25 us the documents that you brought with you today in

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1 response to the request.
2 **A. (Witness complies.)**
3 Q. And I note you've got a lot of other
4 documents sitting on the table in front of you. What
5 are those documents?
6 **A. They're the documents that were in the stack**
7 **of stuff that I had brought home from work with me**
8 **yesterday, including my calendar and a set of exams**
9 **that my students took yesterday.**
10 Q. Okay. Do any of those documents have
11 anything to do with the requests that were made of you
12 to bring documents today?
13 **A. No.**
14 **(EXHIBIT(S) NO. 1 MARKED.)**
15 Q. (BY MR. SIMS) The first document on the
16 stack is a document that I've marked as Deposition
17 Exhibit 1. Will you identify for us what that is,
18 please.
19 **A. This was the first dispersion modeling study**
20 **that I did for Wolf Eagle.**
21 Q. And is that dated May of 2009?
22 **A. Yes.**
23 Q. And this is the first one that you did?
24 **A. Yes.**
25 **(EXHIBIT(S) NO. 2 MARKED.)**

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1 Q. (BY MR. SIMS) The next document in the
2 stack that you've produced today is marked Deposition
3 Exhibit 2. What is that?
4 **A. That's a -- a copy of a check for payment**
5 **for the third study. And I've written on here the**
6 **payment amounts for the first study and the second**
7 **study. I wasn't able to pull those off of the web**
8 **because they've got a time limit, they only post the**
9 **documents for a certain amount of time, and -- but as**
10 **I've written there, I'd be happy to contact the bank**
11 **and get them to mail me copies of those checks.**
12 Q. Just so I've got the timing down, the -- the
13 first check, or the check that's shown on here is
14 dated September 15 of 2010?
15 **A. Right. That was for the third study. And**
16 **the first two studies were prior to that.**
17 Q. The \$1500 charge is for which one? Is that
18 for the --
19 **A. That's for the one you have right there.**
20 Q. And that's Exhibit 1?
21 **A. Yes.**
22 Q. And it's dated May of 2009?
23 **A. Yes.**
24 Q. And the \$750 charge that you've written down
25 here is for what study?

1 A. **The second study, which -- this one**
 2 **(indicating).**
 3 Q. That's dated December 2009?
 4 A. **Yes.**
 5 Q. And that's for the Town of Dish, Texas?
 6 A. **Yes.**
 7 **(EXHIBIT(S) NO. 3 MARKED.)**
 8 Q. (BY MR. SIMS) What is the third document
 9 that you brought with you to produce today that I've
 10 marked as Exhibit 3 to your deposition?
 11 A. **This was payment for a meeting related to**
 12 **the first -- the first study.**
 13 Q. Now, in your description, you talk about
 14 July 24, 2009, "Meeting with Counsel/visit ranch with
 15 Rich and Armendariz." Do you see that?
 16 A. **Yeah.**
 17 Q. What -- what counsel did you meet with?
 18 A. **I'd have to -- I don't remember. It was the**
 19 **Browders' son, he's an attorney, and his firm. I**
 20 **don't remember the name of the firm, without going**
 21 **back and looking.**
 22 Q. And who is the "Rich" that's referred to
 23 there?
 24 A. **Who do you think? It's Alisa Rich.**
 25 Q. Okay. And who is the "Armendariz" that's

1 the actual study that you -- the dispersion model
 2 itself; is that right?
 3 A. **At a loss, yeah, because the study I charged**
 4 **\$1500. I probably spent at least 40 hours on it. So,**
 5 **have you got a calculator, 1500 divided by 40,**
 6 **whatever that is.**
 7 Q. I guess I'm a little confused. It looks to
 8 me like you're charging \$150 an hour for seven hours
 9 for meeting with these people.
 10 A. **Yeah.**
 11 Q. So did you -- did you actually only charge
 12 \$450 for the -- for the study, for doing the
 13 dispersion model?
 14 A. **No. I charged \$1500 for the dispersion**
 15 **modeling study.**
 16 Q. And you charged an additional 1,050 for this
 17 meeting?
 18 A. **Yeah.**
 19 Q. Did you get paid the 1,050?
 20 A. **Yeah.**
 21 Q. Is that reflected anywhere on Exhibit 2
 22 where we asked you to report what you've been paid
 23 from Wolf Eagle or Alisa Rich?
 24 MR. SMITH: Objection, form.
 25 A. **No, but you've got the document right here.**

1 referred to there?
 2 A. **Al Armendariz.**
 3 Q. And who is he?
 4 A. **At that time he was a faculty member at SMU.**
 5 Q. What -- what was this meeting about?
 6 A. **It was about the dispersion modeling study**
 7 **and about the potential for controlled technologies to**
 8 **reduce emissions from the sources.**
 9 Q. Did you get paid this thousand dollars --
 10 \$1050 that you invoiced in connection with this?
 11 A. **Yeah.**
 12 Q. Is the \$1050 for the meeting, for the time
 13 you spent in the meeting?
 14 A. **Yeah. It's -- see, that's, like I was**
 15 **saying, normal rate that I would charge for things.**
 16 **When I did these dispersion modeling studies, I did**
 17 **them at a considerable loss.**
 18 Q. So you charged \$150 an hour for seven hours
 19 for this meeting?
 20 A. **Right.**
 21 Q. Did you actually meet with these people for
 22 seven hours?
 23 A. **That included travel time. Travel time,**
 24 **yes.**
 25 Q. And you got paid some additional money for

1 **I can add it. (Witness writing on Exhibit 2.)**
 2 Q. (BY MR. SIMS) Are there any other invoices
 3 or documents reflecting payments from Alisa Rich that
 4 you haven't produced or told us about so far today?
 5 A. **No, that's it. And, like I said, that is,**
 6 **like, really small money. I work on grants that are**
 7 **\$500,000, \$300,000, \$600,000. And so to try to allude**
 8 **that this somehow influenced my judgment is just, I**
 9 **guess, not intellectually honest. I actually did the**
 10 **studies at a loss.**
 11 Q. How long have you known Al Armendariz?
 12 A. **That's the only time I've ever met him. No,**
 13 **no, no, that's not right. He -- he gave a**
 14 **presentation at UTA in probably 2008, 2009.**
 15 Q. What was his presentation on?
 16 A. **Emissions from natural gas drilling.**
 17 Q. Do you have a copy of that presentation?
 18 A. **Yes.**
 19 Q. What was his conclusion about emissions from
 20 natural gas drilling?
 21 A. **The same as the -- the Environmental Defense**
 22 **Fund study that is available on the Internet. I can**
 23 **provide you the URL if you like.**
 24 **(EXHIBIT(S) NO. 4 MARKED.)**
 25 Q. (BY MR. SIMS) What is Exhibit 4 that you

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1 brought with you today?
2 **A. That's the second dispersion modeling study**
3 **that I did for Wolf Eagle.**
4 Q. And what's the date of it?
5 **A. December 2009.**
6 **(EXHIBIT(S) NO. 5 MARKED.)**
7 Q. (BY MR. SIMS) What is Exhibit 5 to your
8 deposition?
9 **A. That's the third dispersion modeling study.**
10 Q. What's the date of it?
11 **A. July 2010.**
12 Q. Have you done any other dispersion modeling
13 for Alisa Rich or Wolf Eagle?
14 **A. No.**
15 Q. Have you been asked to do any other
16 dispersion modeling for Alisa Rich or Wolf Eagle?
17 **A. No.**
18 **(EXHIBIT(S) NO. 6 MARKED.)**
19 Q. (BY MR. SIMS) What is Exhibit 6 that you
20 brought with you today to your deposition?
21 **A. A paper that was included in the conference**
22 **proceedings for the Air and Waste Management**
23 **Association annual meeting, June 2010, based on the**
24 **first of the three dispersion modeling studies.**
25 Q. Where does -- where -- does this get

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1 published somewhere, or is this just a paper you
2 turned in? I mean, what's the purpose of this?
3 **A. Yeah. It's published in the conference**
4 **proceedings.**
5 Q. What do you mean when you say, "It's
6 published in the conference proceedings"?
7 **A. Air and Waste Management Association issues**
8 **proceedings with written papers from each of its**
9 **annual meetings. So you go to the Air and Waste**
10 **Management Association website, and you can download**
11 **papers from each of the annual meetings.**
12 Q. Is this a peer-reviewed paper?
13 **A. Yes.**
14 Q. In what sense? Who's re -- who reviews it?
15 **A. The session chair and co-chair.**
16 Q. And who is the session chair and co-chair
17 that reviewed this paper?
18 **A. I don't remember without going back and**
19 **looking.**
20 Q. Do they -- do they tell you you have to
21 change things about it or correct --
22 **A. Yes.**
23 Q. -- things?
24 **A. Yes. And that's the final version of the**
25 **paper that includes corrections.**

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1 Q. Were there -- was there a -- were there --
2 do you have prior drafts of this paper where the
3 corrections were --
4 **A. Not anymore.**
5 Q. Do you remember what corrections that they
6 required before this could be published?
7 **A. I'd have to think about it. I had, like,**
8 **four or five students with different papers at that**
9 **conference, so had a lot of corrections, and that was**
10 **last -- the papers are actually due in March.**
11 Q. Have you ever -- have you ever written any
12 other papers with Alisa Rich, other than Exhibit 6 to
13 your deposition?
14 **A. No.**
15 Q. To your knowledge, other than Exhibit 6, has
16 she ever worked on any other paper that's been
17 published anywhere?
18 **A. I don't know.**
19 **(EXHIBIT(S) NO. 7 MARKED.)**
20 Q. (BY MR. SIMS) What is Exhibit 7 that you
21 brought with you to your deposition?
22 **A. That is the presentation that I gave at the**
23 **June Air and Waste conference.**
24 Q. This is the PowerPoint?
25 **A. Right. So that's the presentation that went**

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1 **along with the written paper there.**
2 **(EXHIBIT(S) NO. 8 MARKED.)**
3 Q. (BY MR. SIMS) What is Exhibit 8 that you
4 brought with you to your deposition?
5 **A. It's a grant proposal that Alisa and I**
6 **submitted that was not funded.**
7 Q. And this was a grant proposal that was
8 submitted in December of 2009?
9 **A. Yes.**
10 Q. I note in here that you make the statement
11 that there's not any "peer-reviewed scholarly research
12 concerning measurements of population exposures to air
13 toxic emissions from oil and gas production."
14 Is that an accurate statement?
15 **A. Yeah. Our conference paper didn't come out**
16 **until June of 2010. So this was December of '09.**
17 Q. Other than -- other than this conference
18 paper that we've marked as Exhibit 6, are you aware of
19 any other publications dealing with population
20 exposures to air, toxic emissions from oil and gas
21 production?
22 **A. Oil and gas production is a much more**
23 **general category than natural gas compressor stations.**
24 **So our literature review didn't look at all oil and**
25 **gas production facilities. The information related to**

1 natural gas compressor stations in particular that we
2 knew of is listed in our paper and in the proposal
3 there, if I remember correctly. And we cite
4 Dr. Armendariz' report that you refer to and also some
5 EPA emission factors.

6 Q. Other than that, are you aware of any -- let
7 me just back it up.

8 Are any of the documents that you cite
9 to -- either in your Exhibit 6 or in Exhibit 8, are
10 any of those references peer-reviewed publications, or
11 do you know?

12 A. Well, if you let me look at the references,
13 I can tell you. The EPA emission factors, I -- I
14 assume they have some kind of internal peer reviewed
15 process, but I don't know for sure. This final report
16 for HARC likely had some review by HARC staff. And
17 Dr. Armendariz' report likely has a review by
18 Environmental Defense Fund staff. I don't know for
19 sure.

20 Q. What is the Environmental Defense Fund?

21 A. An environmental nonprofit organization.

22 Q. Are you a member of the Environmental
23 Defense Fund?

24 A. No.

25 Q. Is Dr. Armendariz a member of the

1 Q. What is your understanding of an Effects
2 Screening Level?

3 A. They are used for comparison of dispersion
4 modeling concentrations to assess whether there could
5 be a potential short-term or long-term health impact.

6 Q. The Effects Screening Levels, both long term
7 and short term, are levels that are safe. At least
8 the TCEQ has said they're levels that are safe;
9 correct?

10 A. Yes.

11 Q. And the Effects Screening Levels are used
12 for permitting purposes; are they not?

13 A. That's correct.

14 Q. They are not -- they are not ambient air
15 concentration levels, or shouldn't be used to compare
16 ambient air concentration levels --

17 MR. SMITH: Objection, form.

18 Q. (BY MR. SIMS) -- should they?

19 MR. SMITH: Objection, leading.

20 A. They have been used that way in the past,
21 until recently when TCEQ came out with ACMVs [sic;
22 AMCV] or A -- I don't remember the exact acronym, but
23 they have come out with a new set of values that they
24 say are appropriate to compare ambient measurements
25 with, but that the Effects Screening Levels are still

1 Environmental Defense Fund?

2 A. I don't know.

3 Q. Did I understand you correctly that
4 essentially you don't know if any of these papers that
5 you refer to are actually peer reviewed in an academic
6 sense?

7 A. Yeah, I don't know. I mean, they may have
8 been. I could try to find out for you.

9 Q. But as -- but you -- but as you sit here
10 today, you don't know?

11 A. Right.

12 Q. If you were aware of any peer-reviewed
13 papers dealing with air compressor stations, you would
14 have cited them in your -- in your paper, wouldn't
15 you?

16 A. Yes, in -- in terms of emissions.

17 Q. Are you familiar with the term "Effects
18 Screening Levels"?

19 A. Yes.

20 Q. And that's E-F-F-E-C-T-S, right, Effects --

21 A. Yes.

22 Q. -- Screening Levels?

23 Is that a -- is that a term that's put
24 out by the Texas Commission on Environmental Quality?

25 A. Yes.

1 the appropriate values for comparing dispersion
2 modeling results with.

3 Q. (BY MR. SIMS) And -- and the reason that
4 you -- that you com -- you use ESLs to compare with
5 dispersion modeling is because dispersion modeling is
6 what's used for permitting purposes for big power
7 plants and that sort of thing; correct?

8 A. Yes. Yes.

9 Q. But you're not insinuating or inferring that
10 ESLs should be used for ambient air standards.

11 MR. SMITH: Objection, form. Leading.

12 Q. (BY MR. SIMS) Is that -- is that true?

13 A. They --

14 MR. SMITH: Objection, form. Leading.

15 A. They were used until whenever it was, how
16 many months ago, that TCEQ came out with these AQMV's
17 [sic] or whatever the acronym is. They --
18 historically they have been used in that way, yes.

19 Q. (BY MR. SIMS) But -- and do you know when
20 they came out with the A -- I mean, ACMVs [sic]?

21 A. I'd have to look on the Internet. A number
22 of months ago, but --

23 Q. It was before this summer, wasn't it?

24 A. I don't remember.

25 Q. You just don't remember?

1 **A. Probably, but --**
2 Q. Since the TCE -- TCEQ has come out with
3 ACMV's [sic], you haven't done any studies where you've
4 compared ambient air levels to Effects Screening
5 Levels, have you?
6 **A. No. I -- when they came out with those,**
7 **I --**
8 MR. SMITH: Objection, form. Leading.
9 Excuse me.
10 **A. -- I read about the proper use of the ACMVs**
11 **[sic] versus the Effects Screening Levels to make sure**
12 **that in the studies that I had done I had used the**
13 **appropriate values. And, like I said, the Effects**
14 **Screening Levels are the appropriate values for**
15 **comparison in dispersion modeling studies.**
16 Q. (BY MR. SIMS) Only if they're being used
17 for permitting purposes.
18 MR. SMITH: Objection, form. Leading.
19 Q. (BY MR. SIMS) Correct?
20 **A. No, we use them just in terms of any**
21 **dispersion modeling study.**
22 Q. And who is "we"?
23 **A. Well, myself. I teach my students in my**
24 **class that those are values they can use when they're**
25 **doing a dispersion modeling study to compare to.**

1 **mean by air quality standards versus permitting**
2 **standards.**
3 Q. (BY MR. SIMS) Well --
4 **A. The reason that you use the ESLs for**
5 **dispersion modeling and the ACMVs [sic] for**
6 **monitoring, according to the TCEQ guidance, is that in**
7 **doing dispersion modeling you're typically looking at**
8 **one source and the impacts of one source.**
9 THE VIDEOGRAPHER: Excuse me. Hang on.
10 I've got a cell phone interrupting, Andy. I don't
11 know if it's yours. Something is tearing me up.
12 You're going to have to repeat your
13 answer in a minute, ma'am.
14 MR. HANSEN: It's not me.
15 THE VIDEOGRAPHER: No, yours is all
16 right.
17 MR. SMITH: Videographer, are we okay
18 now?
19 THE VIDEOGRAPHER: We are now.
20 MR. SMITH: Okay. You want her to
21 repeat the answer or finish her answer?
22 THE VIDEOGRAPHER: Please. Going to
23 have to start over.
24 **A. The TCEQ guidance says that the Effects**
25 **Screening Levels are the appropriate values to use for**

1 **There are people in consulting that do odor studies**
2 **that use those values. There's -- you can do --**
3 **there's a variety of circumstances where you might be**
4 **doing dispersion modeling that's not permitting. And**
5 **you can -- those values you can still compare to.**
6 Q. Well, I understand you can -- you can -- you
7 can do a dispersion model and you can compare it to
8 whatever you want to, can't you?
9 MR. SMITH: Objection, form. Leading.
10 **A. What do you mean, compare it to whatever you**
11 **want to?**
12 Q. (BY MR. SIMS) Well, you can compare it --
13 **A. Yes.**
14 Q. -- to an Effects Screening Level; right?
15 **A. Yeah.**
16 Q. You could compare it -- compare it to an
17 AMCV?
18 **A. Well, no. According to the TCEQ guidance,**
19 **dispersion modeling study results are supposed to be**
20 **compared with the Effects Screening Levels.**
21 Q. Even if you are insinuating or implying that
22 the dispersion model that you're doing is for air
23 quality standards as opposed to permitting standards?
24 MR. SMITH: Objection, form. Leading.
25 **A. Well, I don't know -- I don't know what you**

1 **dispersion modeling because when you're doing**
2 **dispersion modeling, typically you're looking at the**
3 **impacts of one source. And so the Effects Screening**
4 **Levels are set lower in some cases than the ACMVs**
5 **[sic] to allow for, like, future additional sources**
6 **that might move into the area that aren't accounted**
7 **for in the dispersion modeling.**
8 **So you don't want one source taking up**
9 **all of the air quality, all of the -- all of the room**
10 **in the atmosphere for emissions of that compound,**
11 **because there may be future sources that move into the**
12 **area that may also emit the compound. So in some**
13 **cases the ESLs are set lower than the ACMVs [sic].**
14 MR. SIMS: Object to the responsiveness
15 of your answer.
16 (EXHIBIT(S) NO. 9 MARKED.)
17 Q. (BY MR. SIMS) Let me show you what I've
18 marked as Exhibit 9 and see if you can identify that,
19 please, ma'am.
20 MR. SMITH: Is there a Bates number --
21 Bates stamp number on that, Counsel?
22 MR. SIMS: Not that I'm aware of.
23 MR. SMITH: Okay.
24 **A. Well, this is what I was just explaining to**
25 **you, that the ESLs are set lower to account for the**

1 fact that you may have more than one source in a
2 region contributing to emissions of the same compound.

3 Q. (BY MR. SIMS) Well, let's just -- let's
4 just go through the document and make sure I
5 understand it; okay?

6 This is an e-mail that you wrote to
7 Greg Schwartz; is that right?

8 A. Yeah.

9 Q. And you copied Alisa Rich at
10 wolfeagleenvironmental.com?

11 A. Yes.

12 Q. And it's dated June 15 of 2010?

13 A. Yeah.

14 Q. Read along with me. I'm going to start in
15 the second paragraph. Make sure I read this
16 correctly; okay?

17 It says, "I reviewed the TCEQ document
18 'Uses of Effects Screening Levels and Air Monitoring
19 Comparison Values.'"

20 A. Uh-huh.

21 Q. And it says, "Its reasoning seems OK."

22 Did I read that correctly?

23 A. Yes, you can read.

24 Q. Okay. And it says, "The ESLs had been set
25 70% lower than the level at which health effects would

1 the basis of odor or health. If it's set on the basis
2 of odor, that doesn't mean that the compound doesn't
3 have a health impact. It just means that the value
4 for the compound causing an odor problem is lower, so
5 they go ahead and set the ESL based on odor.

6 Q. Then it says, "It seems like TCEQ should
7 have been using AMCVs all along as a basis of
8 comparison for monitoring data."

9 Did I read that correctly?

10 A. Yeah. But like I said, they hadn't been
11 doing that until, I guess it was prior to the summer
12 when they came out with the AMCVs.

13 Q. So if someone was taking ambient air tests,
14 certainly after June of 2010, the intellectually
15 honest thing to do would be to compare that data to
16 AMCVs, not Effects Screening Levels; correct?

17 MR. SMITH: Objection, form.

18 A. In my opinion. There are people who suspect
19 the motives of TCEQ in issuing the AMCVs at this late
20 date; why didn't they issue AMCVs 20 years ago?

21 MR. SIMS: Object to the responsiveness
22 of your answer.

23 MR. SMITH: Objection, form.

24 Q. (BY MR. SIMS) When the TCEQ came out with
25 the Air Monitoring Comparison Values with -- the

1 be anticipated to account for the impact of multiple
2 sources."

3 Is that true?

4 A. Yes. That's what I was just trying to
5 explain to you; probably not very articulately, but --

6 Q. So the ESLs or effects screening levels are
7 70 percent lower than what you would expect to find at
8 which health impacts, negative health impacts would
9 occur?

10 A. Yeah. They're trying to account for the
11 fact that you may have another source that moves into
12 that same area that could be emitting the same
13 compound. So they're set low to account for that.

14 Q. Okay. It goes on to say, "So the AMCV
15 values are higher."

16 Is that correct?

17 A. Yeah.

18 Q. "In the cases where the AMCV values are
19 considerably higher (more than a factor of 3), the
20 ESLs had been set low based on odor, not health
21 impacts."

22 Did I read that correctly?

23 A. Yes. If you go to the TCEQ website and
24 download the document that has the ESLs, it has a
25 column where it indicates whether the ESL was set on

1 acronym of which is AMCVs, the intellectually honest
2 thing to do if you're taking air data from ambient air
3 samples would be to compare it to that, not Effects
4 Screening Levels which are set 70 percent lower than
5 the level at which health effects would be
6 anticipated; correct?

7 MR. SMITH: Objection, form. Leading.

8 A. I don't think the issue is that simple,
9 because, as I said, if AMCVs were the proper thing to
10 use, why didn't TCEQ come out with them 30 years ago.
11 So there are people that suspect the TCEQ's motives in
12 issuing the AMCVs. And if you're one of those people,
13 you can argue that it's appropriate to go ahead and
14 continue using the ESLs as we have -- as they have
15 been used the past 20 years or whenever it was that
16 they first came out with ESLs.

17 Q. (BY MR. SIMS) Are you one of the people
18 that suspects the TCEQ's motives?

19 A. I don't know. I've worked with some people
20 at TCEQ that are very technically competent, and I've
21 worked with some people that aren't as technically
22 competent, so I hope that the technically competent
23 people were involved in this decision, but I don't
24 know for sure.

25 Q. When you said that the -- you had reviewed

1 the TCEQ documents, uses of the effects screening
2 levels and Air Monitoring Comparison Values and that,
3 "Its reasoning seems OK," have you changed your mind
4 about that since June 15 of 2010, as you sit here
5 today?

6 MR. SMITH: Objection, form.

7 **A. If I read the document and take it at face**
8 **value, the document seems okay, but there have been**
9 **some other -- other decisions that TCEQ has made that**
10 **I think have not been very technically sound since**
11 **that time.**

12 Q. (BY MR. SIMS) Since June 15 of 2010?

13 A. Yeah.

14 Q. What decisions has the TCEQ made since June
15 15 of 2010 that you think are not technically sound?

16 **A. They have, in response to some citizen**
17 **complaints related to drilling, gone out and often**
18 **measured for a 15-minute time period. And all that**
19 **really tells you is that the ambient air**
20 **concentrations are okay for that 15 minutes. It**
21 **doesn't tell you whether there could be a problem**
22 **under different meteorological conditions, which is**
23 **exactly what the -- the issue that the dispersion**
24 **modeling tries to address, looks at how the**
25 **concentrations vary with varying meteorological**

1 MR. SIMS: Objection, nonresponsive.

2 Q. (BY MR. SIMS) Have you talked to Alisa Rich
3 about the motives of the TCEQ?

4 A. No.

5 Q. Do you -- do you have any reason to think
6 that Alisa Rich questions the motives of the TCEQ?

7 A. Yeah.

8 Q. What do you base that on?

9 **A. Because she's been reluctant to start using**
10 **the AMCVs as a basis of comparison.**

11 Q. And why is she reluctant to use the AMCVs as
12 a basis for comparison?

13 **A. Because we've been using Effects Screening**
14 **Levels to compare monitoring data to for the last 20,**
15 **30 years, however long the ESLs have been in**
16 **existence, and so I think she questions why -- why**
17 **they're just now coming up with them; why didn't they**
18 **come up with them 20, 30 years ago.**

19 Q. Has she asked you that?

20 **A. Why didn't they come up with them 20, 30**
21 **years ago? No.**

22 Q. Has she talked to you about the AMCVs?

23 A. Yeah.

24 Q. And when has she done that?

25 **A. Well, it was probably around the time this**

1 conditions.

2 Q. Have you changed your opinion from June 15
3 of 2010 that, "It seems like TCEQ should have been
4 using AMCVs all along as a basis of comparison for
5 monitoring data"?

6 **A. Like I said before, not from just looking at**
7 **the document at face value.**

8 Q. Are you aware of anyone else who questions
9 the motives of the TCEQ?

10 **A. Well, it's not something I've really talked**
11 **to a lot of people about.**

12 Q. Have you talked to Alisa Rich about it?

13 **A. Well, yeah. I sent her this e-mail.**

14 Q. Did you question the motives of the TCEQ in
15 this e-mail that we've marked as Exhibit 9 to your
16 deposition?

17 A. No.

18 Q. Have you talked to Alisa Rich about the
19 motives of the TCEQ?

20 **A. Well, we talked about what I just told you,**
21 **that in terms of sampling that 15 minutes is not a**
22 **long enough time to conclude whether -- well, it tells**
23 **you whether there's a problem for that 15 minutes. It**
24 **doesn't tell you whether there's a problem in general**
25 **when the meteorological conditions change.**

1 e-mail was sent. I don't remember for sure.

2 Q. Other than through this e-mail, have you had
3 any other conversations or communications with Alisa
4 Rich regarding ESLs and AMCVs?

5 **A. I don't -- she had made some sort of**
6 **statement, like I've told you, that she wonders why**
7 **TCEQ didn't come out with them a long time ago if they**
8 **were the appropriate basis of comparison.**

9 Q. Do you consider yourself to be an
10 environmental engineer?

11 A. Yes.

12 Q. Are you familiar with air quality health
13 standards that are promulgated by, for example, the
14 EPA?

15 **A. You mean the National Ambient Air Quality**
16 **Standards?**

17 Q. Sure.

18 A. Yes.

19 Q. Are you -- are you familiar with standards
20 promulgated by other state entities, such as the
21 California EPA, Cal/EPA?

22 A. No.

23 Q. Are you aware that -- for example, that the
24 EPA air quality guidelines are significantly higher
25 than these E -- the TCEQ ESLs?

1 A. What guidelines?
 2 Q. The ones you just mentioned.
 3 A. They're for different pollutants. National
 4 Ambient Air Quality Standards are for lead, ozone,
 5 carbon monoxide, nitrogen dioxide, sulphur dioxide
 6 and -- did I say carbon monoxide? They're for six
 7 criteria pollutants. These ESLs are for thousands of
 8 different, many of them organic, pollutants.
 9 Q. You're not aware of any other organization
 10 that has quantified air quality standards for these
 11 kinds of compounds, other than the TCEQ?
 12 A. There may be. It's not something I've gone
 13 out and looked for.
 14 Q. Let's talk a little bit about this air
 15 modeling. What type of computer software do you use
 16 to run these air modeling papers you've -- you've
 17 done?
 18 A. It's Lakes Environmental, ISC AERMOD view.
 19 Q. Is that software that you can just buy
 20 commercially?
 21 A. Yes.
 22 Q. Where do you -- where can you acquire it?
 23 A. I buy it from Lakes Environmental. You can
 24 also buy it from Trinity. Those are the two main
 25 firms that -- that make the software.

1 like -- I'd like for you to tell me the ones that you
 2 believe are technically competent that you've met or
 3 dealt with.
 4 A. Brad Toups, Jim Smith, Mike Fishburn.
 5 Q. Anyone else that you believe is technically
 6 competent at the TCEQ?
 7 A. Yes. They have -- like I said, they have
 8 3,000 people that work there. I'm sure thousands of
 9 them are competent.
 10 Q. Who are the incompetent people at the TCEQ
 11 that you have met or worked with?
 12 A. Well, perhaps "incompetent" is too strong a
 13 word, but the people that are going out taking
 14 15-minute samples and then representing the fact
 15 that -- or implying that there's not a problem,
 16 without considering the fact that under different
 17 meteorological conditions there may be a problem.
 18 Q. Do you have any names for us today of people
 19 that you believe are incompetent at the TCEQ?
 20 A. No.
 21 MR. SIMS: We need to change our tape.
 22 Would you like to take a break?
 23 THE WITNESS: Yes.
 24 THE VIDEOGRAPHER: Going off the record
 25 at 10:34.

1 Q. Are the soft -- are they -- are the two
 2 identical, or are they different in some ways or --
 3 A. I haven't used Trinity's version. The --
 4 the equations on the inside are -- are the same, as I
 5 understand it, but there's probably some differences
 6 in the interface.
 7 Q. Let me back up for just a minute and ask you
 8 another question or two about these AMCVs.
 9 If -- if you were doing an ambient air
 10 study, say, after June of 2010, would you use the
 11 AMCVs as the comparison value as opposed to the ESLs?
 12 A. Yes.
 13 Q. And you would do that because you believe
 14 that would be the intellectually honest thing to do;
 15 correct?
 16 MR. SMITH: Objection, form. Leading.
 17 A. It would be because I would take the AMCV
 18 report at face value and -- and hope that the people
 19 who decided to come up with the AMCV standards were
 20 the people at TCEQ that were technically competent.
 21 Q. (BY MR. SIMS) Which ones at the TCEQ do you
 22 believe fall under the technically competent category?
 23 A. They have, like, 3,000 employees.
 24 Q. I believe you told me that you believed some
 25 were technically competent and some are not. I'd

1 (Recess from 10:34 a.m. to 10:46 a.m.)
 2 THE VIDEOGRAPHER: This is Tape 2 of
 3 the deposition. We're back on the record at 10:46.
 4 Q. (BY MR. SIMS) Dr. Sattler, what did you do
 5 to prepare for your deposition today?
 6 A. I talked to Jim for about five minutes
 7 yesterday. I reviewed a document that was faxed to
 8 me, and I collected the documents that I brought with
 9 me, and I looked to see when I had had Alisa in class,
 10 so I would have the dates there.
 11 Q. And did you say you talked to Jim?
 12 A. Or --
 13 THE WITNESS: What's your name?
 14 MR. SMITH: It's Jason Smith.
 15 A. Okay, Jason for --
 16 Q. (BY MR. SIMS) You talked to Jason --
 17 A. -- five minutes.
 18 Q. You talked to Jason for five minutes
 19 yesterday?
 20 A. Yeah.
 21 Q. Have you talked to Jason at any other
 22 time --
 23 A. No.
 24 Q. -- other than yesterday?
 25 A. No.

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1 Q. You and I have never talked before today,
2 have we?
3 A. No.
4 Q. What did you and Jason talk about yesterday?
5 A. **Just, "Try not to be nervous," and just**
6 **general, "Do you have any questions," and that type**
7 **thing.**
8 Q. Did you have any questions?
9 A. No.
10 Q. Are there any -- were there any particular
11 substantive issues that -- that you talked about
12 yesterday related to any of Alisa Rich's work in this
13 case?
14 A. No.
15 Q. Did y'all talk about anything that relates
16 to air quality monitoring in your conversation
17 yesterday?
18 A. No.
19 Q. The document that you said was faxed to you,
20 let's mark that as an exhibit to your deposition. Is
21 that sitting on top of your stack there?
22 A. **Yeah.**
23 **(EXHIBIT(S) NO. 10 MARKED.)**
24 Q. (BY MR. SIMS) I've marked that as Exhibit
25 10 to your deposition. Can you tell me what that is?

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1 A. **And -- and that was the other thing I did.**
2 **I did review this in preparation for today. It's a**
3 **copy of air lab results, water well results provided**
4 **to Mr. and Mrs. Scott Law, dated August 2010.**
5 Q. When is the first time you saw that
6 document?
7 A. **Yesterday.**
8 Q. Had you ever seen any work or reports by
9 Alisa Rich for the Laws prior to yesterday?
10 A. No.
11 Q. Have you ever seen any of Alisa Rich's other
12 work that she did for the Town of Dish or for anyone
13 else, her actual reports?
14 A. **I've ac -- I've accessed some of the**
15 **information that's on the Town of Dish website. And I**
16 **did see a copy of that -- of the final version of that**
17 **first report.**
18 Q. Were you involved at all in drafting any of
19 the reports that Alisa Rich has prepared for the Town
20 of Dish or for the Laws or for anyone else?
21 A. **Not the Laws. For the Town of Dish, I did**
22 **the dispersion modeling study, which was the second**
23 **study that I provided you a copy of.**
24 Q. I understand that, but in terms of any
25 reports that Alisa Rich has actually prepared that

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1 gives some sort of interpretation to the air modeling
2 study or anything like that, have you prepared --
3 worked with her or prepared any of that with her?
4 A. **She included the information that I provided**
5 **you there in her reports that she then gave to Dish --**
6 Q. I understand that.
7 A. **-- or gave to the clients.**
8 Q. But did you actually work with her in
9 preparing her written product?
10 A. No.
11 Q. Have you ever worked with her in preparing
12 any written product?
13 A. **The examples that you have there in the**
14 **stack.**
15 Q. The air modeling studies?
16 A. **Yes. And the -- the conference paper and**
17 **the proposal.**
18 Q. Did you talk to Alisa Rich about this
19 deposition today?
20 A. **I let her know that it was occurring, yes.**
21 Q. And when did you do that?
22 A. **Last week, maybe the week before.**
23 Q. Did you--all have a conversation about it?
24 A. **Yeah.**
25 Q. Where did that conversation occur?

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1 A. **On the phone.**
2 Q. How long did that conversation last?
3 A. **Maybe five minutes.**
4 Q. What did y'all talk about?
5 A. **The fact that I was going to be coming to**
6 **the deposition and had been asked to produce the**
7 **written document.**
8 Q. Did y'all talk about anything in specific
9 related to --
10 A. **And --**
11 Q. -- any of her work?
12 A. **And she told me a bit about the -- the**
13 **sampling that had been done.**
14 Q. What did she tell you?
15 A. **That measurements were taken outside the**
16 **house, inside the house, and that the clients were**
17 **directed not to cook, not to, you know, use the**
18 **fireplace or anything like that during the time that**
19 **the sampling was occurring, and that in fact they were**
20 **getting ready to go on a cruise and so they wouldn't**
21 **have been there in order to do any cooking or anything**
22 **like that.**
23 Q. That's what she told you?
24 A. **(Moving head up and down.)**
25 Q. Is that yes?

1 A. Yes.
 2 Q. Did she tell you that they physically were
 3 not present at the house when she came out to put the
 4 canisters in and that sort of thing, because they were
 5 on this cruise?
 6 A. Yeah. I think she said that they left at,
 7 like, 5 in the morning. I'm not sure what time she
 8 got -- I'd have to look back at the report to see what
 9 time they started the sampling, but ...
 10 Q. They left at 5 in the morning on the day
 11 that they brought the canisters out?
 12 A. That's -- that's what I understood.
 13 Q. What else did she tell you?
 14 A. That was it.
 15 Q. Did she tell you that -- whether she had
 16 done any sort of air modeling study in this matter?
 17 A. No.
 18 Q. Are you aware of whether any air modeling
 19 study was done in this case?
 20 A. I don't think that it does -- that there
 21 was. From reading the report, there was a statement
 22 in it that alluded to kind of results from similar air
 23 modeling studies, but -- but it was -- it was my
 24 understanding from -- from reading here that there was
 25 not air modeling done on this particular set of data.

1 and then you take the results of that and you input it
 2 into the computer program, along with some sort of
 3 pre-purchased meteorol -- meteorological data for,
 4 like, a whole year, and sort of dump all that in the
 5 program, and it spits out results, I guess, for every
 6 day of the year. Is that -- is that fair?
 7 A. You can tell it the kind of results you want
 8 it to give you. The year's worth of meteorological
 9 data has hourly values, and so you can tell the
 10 program that you want 1-hour concentrations and annual
 11 concentrations, but you can also have it give you
 12 8-hour concentrations or 24-hour. Different options.
 13 And you can have it give you the
 14 highest 1-hour concentrations over the annual period,
 15 or you can have it give you the highest 1-hour
 16 concentrations for each day if you want it to tell you
 17 that.
 18 Q. Okay. Well, let's -- I guess let's start
 19 with the meteorological data. Where do you get that
 20 from? Where do you -- do you purchase that from
 21 somebody, or how do you get -- how do you get that
 22 data?
 23 A. Just the year's worth of meteorological
 24 data, I typically get from webmet.com, which is the
 25 Lakes Environmental website, and it's -- it's

1 Q. Okay. We'll -- we'll get into -- into that
 2 here in a little bit. But what I want to talk to you
 3 about now is this air modeling thing, just in a -- I
 4 guess in sort of a general sense, so I -- you can try
 5 to help me understand really what it is; okay? And
 6 what I'm going to do, I'm going to just try to speed
 7 it up a little bit. I'm going to walk through some
 8 things and I want you to tell me if that's accurate or
 9 inaccurate or, you know, try to get me correct on this
 10 air modeling and what it does and what it doesn't do
 11 and that sort of thing; okay?
 12 A. (Moving head up and down.)
 13 Q. Is that fair?
 14 A. (Moving head up and down.)
 15 Q. Yes?
 16 A. Yes.
 17 Q. Okay. As I understand it, this -- this air
 18 modeling is essentially a computer program into which
 19 you input data; is that --
 20 A. Yes.
 21 Q. And the computer program runs the model.
 22 A. Yes.
 23 Q. And as I understand it from looking at these
 24 other reports and things, someone such as yourself
 25 might go out and take a collection of an air sample,

1 available free.
 2 Q. That's W-E-B --
 3 A. Yeah.
 4 Q. -- M-E-T?
 5 A. M-E-T.
 6 Q. Dot com?
 7 A. Yeah.
 8 Q. And is this just a set of meteorological
 9 data that applies nationwide, or by region, or -- I
 10 mean, what?
 11 A. They've got data on the website for the
 12 entire country. But, of course, we pulled the data
 13 that's specific to DFW.
 14 Q. And when you say you pulled data specific to
 15 DFW, what do you -- what do you mean by that?
 16 A. Well, if you look in the report that I've
 17 done, I list the monitoring -- the meteorological
 18 station for which I pulled the data. So there's two
 19 levels of meteorological data: there's surface data
 20 and there's upper air data. For surface data, the
 21 data is from DFW International Airport. For the upper
 22 air data, it's Stephenville. There's not a DFW
 23 International Airport upper air data. So that --
 24 that's in the report.
 25 Q. How -- let's say that you're using -- let's

1 say that the place you're actually testing is, say, 30
2 miles away from DFW Airport and 30 miles away from
3 Stephenville. Is it more reliable or less reliable to
4 actually collect weather data from the site that
5 you're actually testing?

6 **A. It's more reliable to have data on the --**
7 **collected on the site, but that's rarely done. If you**
8 **are doing dispersion modeling for permitting purposes**
9 **and you're wanting to use on-site data, you have to**
10 **actually collect five years of on-site data. And most**
11 **people, if they're applying for a permit to build a**
12 **facility, they don't want to wait five years to build**
13 **their facility while they're collecting on-site**
14 **meteorological data. So the data that I used in these**
15 **studies is the data that's used for permitting, for**
16 **people applying for permits to TCEQ.**

17 **Q. How much less reliable is using data,**
18 **weather data, from a long distance away, say, 30**
19 **miles, than it is from actually on-site? Have you**
20 **done any statistical analysis to try to determine**
21 **what -- what the rate of error, to calculate the --**
22 **the rate of uncertainty is for that one piece of it?**

23 **A. No, I haven't, but, again, the data that I**
24 **used is what is used all the time for permitting**
25 **purposes. So TCEQ, in permitting new facilities that**

1 these computer air models? How many -- how many
2 different samples, air samples do you need so that
3 there's any sort of statistical reliability with it?

4 **A. Well, of course, more would be better, but**
5 **more also means greater cost. And the -- the**
6 **concentrations that are measure -- that are present in**
7 **the atmosphere are a function of the emissions coming**
8 **from the source and the meteorology that occurs**
9 **between the source and the place that you're measuring**
10 **the concentrations. So the concentrations that you**
11 **measure, functions of the emissions coming from the**
12 **source and then the meteorology. If you are able to**
13 **collect more data concerning the emissions, then that**
14 **enables you to capture more variability.**

15 **With the modeling, we're able to**
16 **capture the meteorological variability well, because**
17 **you import a year's worth of hourly meteorological**
18 **data and you get 8760 different values. In terms of**
19 **the emissions in these studies, the emission rates we**
20 **had to assume to be constant, which likely means**
21 **we're -- we were probably underestimating worst case.**

22 **Q. When you say that on the emission rate, you**
23 **had -- you have to assume it to be constant, why is**
24 **that? Because you only have, like, one sample, one**
25 **air sample?**

1 **want to move to Dallas/Fort Worth, allow the**
2 **dispersion modelers to use these standard sets of data**
3 **that are not site-specific. So it's a common accepted**
4 **practice.**

5 **Q. For permitting purposes?**

6 **A. Yes. I will tell you that the -- the more**
7 **unflat the terrain is, the worse error you would have**
8 **in using meteorological data that was not**
9 **site-specific. So the fact that we've got pretty flat**
10 **terrain in Texas means that we don't have the error**
11 **that you would have if you were trying to do the same**
12 **thing in Colorado, say.**

13 **Q. But you've done nothing to calculate the**
14 **rate of error that exists in -- in actually using**
15 **weather data from a long distance away from the site**
16 **that you're trying to --**

17 **A. I haven't done that, but neither have any of**
18 **the consultants that do modeling for permitting on a**
19 **daily basis. I doubt that anybody has gone and done**
20 **that. There may be something in the peer-reviewed**
21 **literature that I could look for.**

22 **Q. In terms of the air samples that are input**
23 **into the computer program, tell me about that. How**
24 **does that -- how many -- how many do you need in order**
25 **to -- to run a viable -- a viable analysis on one of**

1 **A. Yeah, because we just had, like, a 2-hour or**
2 **a 24-hour sample that we were working with.**

3 **Q. So --**

4 **A. In order to -- to capture the variability in**
5 **the emissions, we would have had to have had access to**
6 **the actual compressor engine and been able to put a**
7 **monitor on the stack from the compressor engine and**
8 **leave it there for, like, 30 days. But we didn't have**
9 **access to the site and so we assumed that the emission**
10 **rate was constant. And that's actually -- that's**
11 **actually routinely done in these kind of studies,**
12 **although if you -- if you have access to better data,**
13 **that's better.**

14 **Like I said, what that means is that we**
15 **were likely underestimating the worst case, because**
16 **it's most likely that the -- the two hours of data or**
17 **the 24 hours of data did not catch the emissions at**
18 **their highest rate.**

19 **Q. And why is that? Just based on --**

20 **A. Well, maybe we got lucky, but ...**

21 **Q. But you really don't know?**

22 **A. No, I don't know for sure, but there's 8760**
23 **hours in a year, and if we happen to go out there for**
24 **the two hours when the emissions were at the highest**
25 **rate, you know, what's the likelihood of that?**

1 Q. Have you done any sort of calculations to
2 determine the potential rate of error for only -- for
3 using only one air sample, say, as opposed to 20 or 30
4 or 40?

5 A. No.

6 Q. Is that possible to do that kind of
7 calculation?

8 A. **You'd have to -- you'd have to have the 30,
9 40 samples.**

10 Q. But it can be done? You -- you could run it
11 with one and then run it with the others and do a
12 calculation to determine --

13 A. **Yes, you could, and the result most likely
14 is that from using the one 2-hour, you're
15 underestimating, because it's most likely that if you
16 had more data you'd pick up emission rates that were
17 higher.**

18 Q. Are you under -- are you familiar with any
19 standards for testifying in a court of law?

20 A. No.

21 Q. Do you acknowledge that there is a -- that
22 there is a difference between running a study for the
23 purposes of air permitting versus performing a study
24 for the purposes of determining whether the air
25 quality has any actual adverse health impact on

1 **data that you're using. So they're representative of
2 the kind of meteorological conditions that occur in a
3 region, but the dispersion model isn't going to tell
4 you that the exact concentration of a compound at 3:14
5 on a given day is going to be this.**

6 Q. And the reason is, is that on any given day
7 the -- the concentration may be vastly different than
8 what the computer model says, because the weather may
9 be different, the humidity may be different, the wind
10 may be different, the emission rate may be different
11 than what was put into the computer program; correct?

12 A. **Well, with the model you're -- you're trying
13 to get representative concentrations. So you're using
14 that year's worth of historical meteorological data to
15 give you the kind of concentrations that you would
16 expect in a region, but you're not using it to try
17 to -- I don't know if that's what your question was
18 getting at, but ...**

19 Q. You're not using it to try to what?

20 A. **To try to pre -- estimate that the
21 concentration at 3:12 on this particular day is going
22 to be this. And that's the same sense in which it's
23 used in permitting, where they look at an annual,
24 year's worth of meteorological data to try to get a
25 sense of the kinds of concentrations that would be**

1 someone?

2 A. **Can you repeat the question?**

3 Q. Do you acknowledge that there -- there is a
4 difference in running an air study or modeling study
5 for the purposes of permitting, as opposed to a study
6 for determining whether there -- whether the air
7 actually contains, at any given time, quantities of
8 compounds that would actually be harmful to human
9 health?

10 A. **Well, you don't do a dispersion modeling
11 study to determine whether the air actually contains
12 compounds at a given time that would be harmful to
13 human health.**

14 Q. Okay. What -- what do you do an air study
15 for?

16 A. **Well, the -- the likely concentrations in
17 the atmosphere are a function of, like we said,
18 emissions and meteorology. The meteorology piece is
19 what the dispersion modeling allows you to -- it
20 allows you to determine what the con -- ambient
21 concentrations would be like under a variety of
22 different meteorological conditions.**

23 Q. But they're hypothetical; correct?

24 A. **Well, I mean, they're the real
25 meteorological conditions that occurred in the year of**

1 **expected.**

2 Q. So if I -- if I understand what -- what you
3 did in -- in these three air modeling studies you've
4 told us about -- and, by the way, have you done any
5 other air modeling studies besides these three that
6 you've told us about?

7 A. **Not for natural gas compressor stations, but
8 I've done other air modeling studies.**

9 Q. And who have you done them for?

10 A. **I used to do them back when I was in
11 consulting, with Alan Plummer & Associates, and I've
12 also done some dispersion modeling for TCEQ.**

13 Q. For permitting purposes?

14 A. No.

15 Q. For what purpose?

16 A. **I had a -- a project with them where they
17 were looking at revising their permit for surface
18 coating facilities, and the project involved some
19 dispersion modeling to determine setback distances
20 from surface coating facilities that would be
21 protective of human health.**

22 Q. Now, if I understand what you -- what --
23 what you've done in terms of air modeling, you -- you
24 take this air sample, and whatever results the GD Air
25 Testing comes up with, you use those concentrations as

1 if those were the -- the actual concentrations 365
2 days a year; correct?
3 **A. Not exactly. The -- take -- I take those**
4 **concentrations and then back into a source emission**
5 **rate, and then that source emission rate stays**
6 **constant while the meteorological conditions change.**
7 Q. Okay. Let's talk about that. How is it
8 that you back into a source emission rate? And
9 explain, if you would, what you mean by that, when you
10 say you "back into a source emission rate."
11 **A. The -- the -- the Gaussian dispersion model**
12 **equation that's the heart of the computer software**
13 **estimates concentrations based on an emission rate,**
14 **meteorological parameters and so on. Basically, if**
15 **you solve the equation backwards, given a**
16 **concentration, you can get what the emission rate**
17 **would have had to have been to produce that**
18 **concentration.**
19 **So I -- that's what's done in the first**
20 **step of the -- the modeling process, is to run the**
21 **model and see what source emission rate gives the**
22 **measured concentrations, using meteorological data on**
23 **the actual day that the modeling -- on the actual day**
24 **that the sample was collected. And then that source**
25 **emission rate is held constant while the year's worth**

1 variables that have to be accounted for in order to do
2 this back -- to back into what the source emission is?
3 **A. It's the same variables that go into the --**
4 **the model itself.**
5 Q. Let's go through those. Let's start with
6 the weather conditions. Do you have to know the wind
7 speed?
8 **A. Yes.**
9 Q. Exact wind speed?
10 **A. It's hourly wind speeds.**
11 Q. Okay. So at the hour that your sample was
12 collected, you've got to know what that wind speed is
13 to the -- as accurate as you can get it; correct?
14 **A. Yeah.**
15 Q. Do you have to know the wind direction?
16 **A. Yes.**
17 Q. Do you have to know the temperature?
18 **A. Yes.**
19 Q. Do you have to know the humidity?
20 **A. I don't think humidity is in there, no.**
21 Q. Do you have to know barometric pressure?
22 **A. No.**
23 Q. What other weather conditions are variables
24 that have to be accounted for to back into a source
25 emission like you purport to do in these reports?

1 of meteorological data is run through the model.
2 Q. What's the rate of error in backing into a
3 source emission rate as opposed to actually collecting
4 the data straight from the source?
5 **A. I don't know, but obvious -- obviously it**
6 **would be better to collect the data straight from the**
7 **source, but we didn't have that option. As I**
8 **mentioned, if you could put a -- put a device on the**
9 **compressor engine stack and measure what's coming out**
10 **directly, over like a 30-day period, to pick up**
11 **variability in -- in emissions, that would be ideal.**
12 **But in this case we didn't have -- if you could get a**
13 **company to let us put a monitor on the compressor**
14 **engine for 30 days, that would be great, but we**
15 **haven't had that option thus far.**
16 Q. Have you ever -- have you ever tested this
17 back-in theory against any actual data to determine
18 the rate of error --
19 **A. No. I --**
20 Q. -- that's inherent in that?
21 **A. I would like to do that. Like I said, if I**
22 **could actually be in the position to put a monitor on**
23 **a compressor engine, that would be great.**
24 Q. On the given day that you test or that the
25 air -- that the air sample is taken, what are all the

1 **A. Mixing height and atmospheric stability.**
2 Q. What do you mean when you say "mixing
3 height"?
4 **A. It's the height to which pollutants in the**
5 **atmosphere mix up to.**
6 Q. Does that vary day-to-day?
7 **A. Yes.**
8 Q. And what are the factors that cause that to
9 vary?
10 **A. Terrain, the -- if you've got a situation**
11 **with terrain with a higher roughness length, then you**
12 **get more mechanical turbulence that causes mixing.**
13 **It's also dependent on radiation. If you've got more**
14 **solar radiation, then you get more thermal turbulence**
15 **that causes a higher mixing height. It's also a**
16 **function of whether you've got an inversion, which an**
17 **inversion puts a cap on vertical mixing.**
18 Q. What was the other thing you said other than
19 mixing height?
20 **A. Stability.**
21 Q. Was that atmospheric stability?
22 **A. Yeah.**
23 Q. What accounts for that?
24 **A. Well, it's -- it's actually related. It's a**
25 **measure of the turbulent vertical mixing in the**

1 atmosphere.
2 Q. So on the day that -- that the -- that
3 the -- is it a 1-hour sample that you collected for
4 these reports?
5 A. I think in two cases it was 2-hour, in the
6 other case it was 24-hour, but let's see.
7 One was 2-hour and the other two were
8 24-hour.
9 Q. And what were you looking at to determine
10 that?
11 A. The three reports. And the -- the AWMA
12 paper.
13 Q. Well, let's take the 2-hour sample. Which
14 hour -- which hour's weather data did you use, the
15 first hour or the second hour?
16 A. Both.
17 Q. And where did you get that weather
18 information from, right there on-site or --
19 A. From NOAA, and that's in the report,
20 National Ocean -- Oceanographic and Atmospheric
21 Administration [sic] website.
22 Q. And is that from -- where is that data
23 collected?
24 A. I'm not sure. I can find out for you.
25 Q. Well, I guess my question is, was it

1 available free from the website.
2 Okay, two of them I used the data from
3 National Ocean -- National Oceanic and Atmospheric
4 Administration, and then the third one I got the data
5 from Lakes.
6 Q. Do you --
7 A. And when I got the data from Lakes, it
8 actually was specific to the site location because
9 they ran a meteorological model, MMS, that
10 interpolates among observed data to give data for the
11 actual site.
12 Q. But that's a simula -- that's a computer
13 simulation?
14 A. It's a computer simulation from actual
15 observed data for the 24 hours, to try to improve on
16 the fact that you don't have a monitoring station at
17 the actual site where you're doing the -- the modeling
18 study, as we've been talking about.
19 Q. Well, if you -- if you have a 24-hour
20 sample, what -- what do you actually input into the
21 program? Is it -- is it -- is it an average of
22 those --
23 A. No, it's --
24 Q. -- 24 hours for that one hour?
25 A. It's hourly meteorological data --

1 collected at the site where the sample was taken?
2 A. No.
3 Q. But you don't know how far away it was
4 taken?
5 A. No. I could find that out for you.
6 Q. Is that where you -- is that where you get
7 the wind speed and the wind direction and --
8 A. Yes.
9 Q. -- the temperature?
10 A. Yes.
11 Q. And the mixing height?
12 A. Yes.
13 Q. And the stability?
14 A. Yes.
15 Q. You get all that from the National -- what
16 is it?
17 A. National Oceanographic and Atmospheric
18 Administration [sic], in the case of that study. In
19 the -- a later -- I'd have to actually look, but I got
20 the data from Lakes Environmental in one or perhaps
21 the other two cases. So I actually, FYI, spent 300 of
22 the -- of the \$750 that I was paid for doing this to
23 get the meteorological data from Lakes because it was
24 specific to the day on which the sample was collected.
25 It wasn't just that general annual data that is

1 Q. Okay. Meteorological?
2 A. -- for those 24 hours, yes.
3 Q. All right. What about the air
4 concentration, what do you put in that?
5 A. The one average measured 24-hour value,
6 because when you collect a sample in a SUMMA canister,
7 if it's a 24-hour sample, the concentration that you
8 get from the canister is an average over that 24
9 hours.
10 Q. So over that 24-hour period the wind could
11 vary from windy to not windy at all.
12 A. We have the hourly meteorological data that
13 goes in there.
14 Q. But I'm talking about on your back-in
15 calculation --
16 A. Right.
17 Q. -- it's critical to know exactly what --
18 what these factors were for the one hour that you are
19 using the data to do the back-in calculation, isn't
20 it?
21 A. No. If the -- if the sample was a 24-hour
22 sample, the back-in calculation is run for 24 hours,
23 and so I have 24 hourly sets of meteorological data.
24 Q. If the data is for a 2-hour time period, do
25 you just run it on a 2-hour?

1 A. Yes.
2 Q. And if it's for a 1-hour time period, you
3 run it for a 1-hour?
4 A. **There weren't any cases of 1-hour. Two of**
5 **the studies had 24-hour and one of the studies had a**
6 **2-hour.**
7 Q. Which is more reliable, doing it for a
8 24-hour or a 2-hour?
9 A. **Well, 24-hour, you are picking up more of**
10 **the -- potentially more of the variation in emissions.**
11 Q. So is it more ac -- more reliable than the
12 2-hour test?
13 A. **Yeah.**
14 Q. How much more?
15 A. **I don't know.**
16 Q. Ten times more reliable?
17 A. **I don't know. I'd have to have some data**
18 **and try and do an analysis.**
19 Q. But you've never done that?
20 A. **No. Nobody has ever asked me to do that.**
21 Q. You're not aware of anyone that's ever
22 looked into the reliability of what you're doing in
23 terms of this air modeling?
24 A. **Dispersion modeling itself, yes. There are**
25 **a number of studies on EPA website where they have**

1 Q. And that -- that's in the -- in the studies
2 that you've told us about that you did, the three --
3 A. **Yes.**
4 Q. -- for Wolf Eagle?
5 A. **Yes.**
6 Q. You're not talking about anything that's --
7 A. **No.**
8 Q. -- been done in this case.
9 A. **No. It's the three studies that -- that I**
10 **gave you copies of.**
11 Q. And I want to try to understand that, too.
12 On this -- on this air modeling, as I understand it,
13 once you -- once you put in the concentration value
14 and then you overlay the weather data on that, you
15 tell the computer I want the maximum 1-hour
16 concentration level, what, for the year?
17 A. **Yes. You can -- that's what's reported in**
18 **these studies here, but, as we talked about, if you**
19 **want the maximum 1-hour value for every day of the**
20 **year, you can get it to tell you that.**
21 Q. So what -- what you do is you go through and
22 look at the computer simulation and you tell it, I
23 want you to give me the -- the computer simulation
24 maximum value for a 1-hour time period for the entire
25 365 days, and that's what you report in your --

1 gone out, released a tracer into the atmosphere,
2 measured ambient concentrations, and then compared
3 those concentrations to the predicted model
4 concentrations. And people who do dispersion modeling
5 don't go redo those studies, because, you know,
6 they're very costly and EPA has done them, so there's
7 no need to -- to go redo them.
8 Q. Do most of those studies show that the
9 dispersion model is -- has a factor of at least about
10 a 20 percent inaccuracy rate?
11 A. **Yeah.**
12 Q. Or more?
13 A. **Yes. It depends, though, on which number**
14 **you're looking at. In terms of annual average**
15 **concentrations, the models do better. And in terms of**
16 **1-hour maximum concentrations, the models do better,**
17 **which are the values that were reported in the**
18 **dispersion modeling study there. However, you can't**
19 **make the conclusion that there's no problem because**
20 **there's inaccuracies in the models, because if you**
21 **look at the data here, the Effects Screening Levels**
22 **were exceeded in many cases by factors of, say, a**
23 **thousand. So even if there's a 20 percent error in**
24 **the model, Effects Screening Levels would still be**
25 **exceeded.**

1 A. **And I also report the annual average where**
2 **the program averages the concentrations over the 8760**
3 **hours, and that's compared with the long-term Effects**
4 **Screening Level. So you can't just say, well, maybe**
5 **the Effects Screening Level was just exceeded for one**
6 **hour and so we don't have a problem the rest of the**
7 **hours, because in most cases, as you'll see in the**
8 **studies, the annual average was exceeded.**
9 Q. Okay. Now, let's switch gears for just a
10 minute, and I want to talk about ambient air studies.
11 If you take a 24-hour ambient air sample, is it
12 improper to compare whatever the test results of that
13 are to a long-term ESL?
14 A. **Yes. It's not improper to compare it to a**
15 **short-term ESL, because your concentrations increase**
16 **with a -- well, okay, concentrations decrease with an**
17 **increase in averaging time, and so you could -- you**
18 **could compare a 24-hour sample with a short-term**
19 **Effects Screening Level. It's -- it's not in your**
20 **best interest to do that, because the 24-hour**
21 **concentration is most likely lower than a 1-hour**
22 **concentration, but you could do that.**
23 Q. But you can't appropriately compare a
24 24-hour sample to long-term ESLs.
25 A. **Right.**

1 Q. Now, I want to -- one thing that's -- that's
2 really confusing to me that I want to -- I want to ask
3 you about is, if I understand what you've told me so
4 far, you -- you can go out and take a 24-hour sample,
5 and we've established that if you take that ambient
6 air sample and go get it tested, it's inappropriate to
7 compare that to long-term ESLs.

8 A. Yes.

9 Q. Okay. But if I understand what you're doing
10 in these reports is you take the 24-hour sample and
11 input it into this computer program and use the
12 back-in levels, concentrations that you've told us you
13 somehow calculate using this weather data for that
14 given time period, and once it comes out on the other
15 end, haven't you taken a 24-hour sample and compared
16 it to long-term --

17 A. No, sir.

18 Q. -- ESLs?

19 A. Absolutely not.

20 Q. And why -- why not? Explain that to me.

21 A. Because I run the model twice. I run the
22 model once with the 24-hour average concentration data
23 and the 24 hours of meteorological data that
24 correspond to the same 24 hours under which the sample
25 was collected and get a concen -- a emission rate from

1 Q. (BY MR. SIMS) Right?

2 MR. SMITH: Side-bar.

3 A. Whenever it was. I don't know without
4 looking back at the Internet.

5 Q. (BY MR. SIMS) We know it was prior to June
6 of 2010.

7 A. Yeah.

8 Q. So when you -- when you go out and get the
9 ambient air sample tested, the appropriate thing to
10 do, since June of 2010 at least, would be to compare
11 that to these Air Monitoring Comparison Values, not
12 ESLs; correct?

13 MR. SMITH: Objection, form. Leading.

14 A. If -- if you're doing that comparison
15 directly. I didn't do that. As I just described, I
16 used the 24-hour samples, ran the computer model to
17 back into an emission rate, and then ran -- used that
18 emission rate with a year's worth of meteorological
19 data to come up with maximum 1-hour concentrations and
20 annual concentrations, which the TCEQ guidance says
21 you compare short-term ESLs with 1-hour model
22 concentrations and you compare long-term ESLs with
23 annual model concentrations, which is exactly what I
24 did.

25 Q. (BY MR. SIMS) Okay. Is the purpose of

1 that. And then that emission rate is held constant.
2 When I -- and I run the model again using 8760, a
3 year's worth of meteorological data. And then I
4 compare the annual average concentration from those
5 8760 hours of meteorological data with the long-term
6 Effects Screening Level, which is absolutely
7 appropriate.

8 And I also, when I run the model the
9 second time, choose the 1-hour averaging time and
10 compare the 1-hour value to the short-term Effects
11 Screening Level, which is a 1-hour Effects Screening
12 Level, which is also appropriate.

13 Q. Okay. Maybe I'm -- maybe I'm not
14 articulating this well. I think we established
15 earlier that if you went out and took a 24-hour
16 ambient air sample, had it tested, if you were going
17 to generate a report, the appropriate thing to do
18 would be to -- for air quality purposes would be to
19 compare the report analysis to these AMCVs; correct?

20 A. According to what TCEQ is saying now. Up
21 until, like, six months ago, what you did was compare
22 with the ESLs.

23 Q. It was actually longer than six months.

24 A. Okay. Whenever it was.

25 MR. SMITH: Objection, form.

1 the -- of the computer model to give a rep -- to give
2 a representative value of the compounds in the air at
3 any given time during the year? Is that the purpose
4 of the air modeling program?

5 A. Well, if you choose annual concentration,
6 it's to give you a reasonable estimate of the annual
7 average concentration. We talked about the fact that,
8 yeah, there's 20 percent error or whatever it is,
9 but -- and if you choose the 1-hour, it will tell you
10 the maximum 1-hour concentration that's likely.

11 Q. And if -- if you -- if you went out and did
12 that -- did that test on that day through ambient air
13 sampling, the appropriate thing to do would be to
14 directly compare that to AMCVs, if the purpose of
15 your -- what you're doing is to try to talk about or
16 report air quality; correct?

17 MR. SMITH: Objection, form. Leading.

18 Q. (BY MR. SIMS) Correct?

19 A. Well, maybe you're kind of not understanding
20 the purpose of the modeling. If you go out and you
21 collect an air sample for 24 hours, all that tells you
22 is what the concentrations were like for that 24
23 hours. And unless you got awfully lucky, you probably
24 didn't measure a concentration during the time when
25 you had the highest emission rate and the worst case

1 meteorology, because the concentrations that you
2 measure are a function of the emission rate and
3 meteorology. And so maybe you go out there and you
4 get really lucky and the 24 hours when you sample are
5 the highest emission rate for the entire year and the
6 worst meteorological conditions for the entire year,
7 but more than likely not.

8 And so what the dispersion model allows
9 you to do is look at how the concentrations vary under
10 a spectrum of different meteorological conditions, and
11 so you run through a year's worth of meteorological
12 data and the dispersion modeling gives you annual
13 average concentrations, and then it also can tell you
14 1-hour maximum when you have worst case meteorological
15 conditions.

16 Q. And that's what you reported in these three
17 reports --

18 A. Yes.

19 Q. -- you've told us about. Worst --

20 A. Yes.

21 Q. Worst case scenario.

22 A. The 1-hour. The annual is not really a
23 worst case. The annual is an annual average. So it
24 includes meteorological conditions that are good and
25 bad.

1 methodology; correct?

2 A. Right. Well, depends on what you're --
3 24-hour sampling is good, as we talked about, in the
4 fact that the longer you collect a sample, the more
5 variability you're likely to capture in terms of
6 emission -- emissions. So it's good from that
7 standpoint. The problem is you don't have a 24-hour
8 ESL to compare to directly.

9 Q. Okay. Let's assume that -- that somebody,
10 good, bad or indifferent, goes out and puts out a
11 canister for 24 hours outside, they collect the data,
12 they send it off and get it tested, and let's assume
13 that it -- that they compare, this hypothetical person
14 compares it to the short-term ESLs. Are you with me?

15 A. Yeah.

16 Q. And let's assume that it doesn't -- that
17 nothing in there exceeds any short-term ESL; okay?
18 Are you with me?

19 A. Okay.

20 Q. Taking those assumptions and those
21 assumptions only, what can you conclude from that,
22 that test?

23 A. Not much.

24 Q. Okay.

25 A. You can conclude that there was not an

1 Q. Let's assume that you go out and take a
2 24-hour sample in a -- in a canister outside. Let's
3 say that's all you have. You go send it to the air
4 lab and have it tested; okay? Are you with me?

5 A. Yes.

6 Q. You get your report back and you look at
7 that report and it -- there's not a single compound on
8 there that was tested that exceeds any short-term ESL;
9 okay? Are you with me?

10 A. Okay.

11 Q. Are you with me?

12 A. And again, that's not exactly the
13 appropriate comparison, because a 24-hour average
14 concentration will be lower than a 1-hour. So you're
15 putting yourself at a disadvantage to -- to make that
16 comparison, but, okay.

17 Q. Okay. Well, let's assume that -- that
18 somebody did that.

19 A. Okay.

20 Q. Somebody went out and put a canister out and
21 collected the sample for 24 hours; okay? Are you with
22 me?

23 A. Yeah.

24 Q. Whether that's good methodology or bad
25 methodology, you know, you don't think it's the best

1 exceedance of the short-term ESL for the 24 hours in
2 which you collected the sample.

3 Q. Okay.

4 A. But that doesn't tell you that there's not
5 any health impacts, because to evaluate whether
6 there's health impacts, you would need a 24-hour ESL
7 to compare it to. So, again, with higher averaging
8 time you get a lower concentration. And so -- okay,
9 give an example --

10 Q. Listen, we're going to get through this a
11 lot quicker if you respond --

12 MR. SMITH: I'm going to object --

13 A. I am re --

14 MR. SMITH: -- to your side-bar. She's
15 responding.

16 A. I am responding.

17 MR. SMITH: You get to ask another
18 question, Counsel.

19 A. Well, I'm trying -- I'm trying to explain to
20 you, if you really want to understand this stuff.

21 You take a 24-hour sample. You may get
22 an average concentration of the compound of, say, 10
23 parts per billion over that 24 hours. Now, let's say
24 the 1-hour ESL was 30. Well, you don't know, you may
25 have had some 1-hour periods where you had 30

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1 concentrations, but then the -- the average over the
2 24 hours was 10 because maybe the concentrations
3 fluctuated from 40 down to 5. And so you may have had
4 some 1-hour periods during that 24 hours where you had
5 a problem. But you don't know that, because you don't
6 have 1-hour data.
7 So you can't just say that -- that's
8 why I'm saying the appropriate ESL to compare to would
9 be a 24-hour, but we don't have a 24-hour. And so if
10 you -- if a 24-hour sample exceeds a 1-hour ESL, then
11 you know you've got a big problem. But if the 24-hour
12 doesn't exceed the 1-hour, it doesn't -- doesn't mean
13 there's not a problem, because you could have had one
14 hour during that 24-hour period where the 1-hour ESL
15 was exceeded.
16 Q. Let's -- let's go back to your --
17 A. But the --
18 Q. -- your first statement. When I asked you
19 if you take a 24-hour sample, you send it off and get
20 it tested and it comes back and there's not a single
21 thing on there that's actually tested for that exceeds
22 a short-term ESL, you said that test doesn't tell you
23 much.
24 A. Well, and I'm --
25 Q. That's true, isn't it?

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1 A. I'm trying to explain why.
2 Q. I understand. And that's true, it doesn't
3 tell you much, does it?
4 MR. SMITH: Objection, form.
5 A. You may have a problem, but you may not have
6 a problem.
7 Q. (BY MR. SIMS) You just --
8 A. You don't know.
9 Q. You just don't know.
10 A. (Moving head up and down.)
11 Q. And your explanation is -- is to explain,
12 really, that the reasoning behind why, you may not
13 have a problem, you may have a problem; there's just
14 no way to tell.
15 A. Right.
16 Q. Do you know what a tentatively identified
17 compound is?
18 A. Not specifically. I know that the compounds
19 are reported that way from labs when they do gas
20 chromatography, but I don't know the criteria they use
21 to tentatively identify a compound versus absolutely.
22 Q. Do you know what the rate of error is in
23 connection with tentatively identified compounds?
24 A. No. I could find out. I could call a
25 testing lab and -- and find out for you.

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1 Q. Are you -- are you aware that the TCEQ has
2 said that tentatively identified compounds cannot be
3 identified either as to -- let me -- let me strike
4 that question and start over.
5 Are you aware that the TCEQ has said
6 that with respect to tentatively identified compounds,
7 they cannot be quantified accurately or identified
8 accurately?
9 MR. SMITH: Objection, form.
10 A. Well, what do they mean by "accurately"?
11 Q. (BY MR. SIMS) Are you aware of any -- of
12 any statements by the TCEQ related to tentatively
13 identified compounds?
14 A. No.
15 Q. Are any of the things that were reported in
16 these air modeling studies tentatively identified
17 compounds from the air studies?
18 A. Yes.
19 Q. Was that disclosed in those reports?
20 A. No, but it was disclosed in the actual
21 laboratory data that was provided, to my
22 understanding, in the full report.
23 Q. Have you ever performed any air quality
24 studies on the interior of homes?
25 A. No.

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1 Q. Are you aware of anyone who ever has?
2 A. Yes.
3 Q. Who are you aware of that's done that?
4 A. One of my former professors at UT Austin is
5 actually now a expert in indoor air quality.
6 Q. And who is that?
7 A. Rich Corsi at UT Austin.
8 Q. Do you have any general knowledge about
9 compounds on the interior of homes that are frequently
10 seen in the air, or detected in the air?
11 A. A little bit, but that's not really my area.
12 Q. Is there anyone at UTA that -- who that is
13 their area?
14 A. No. Rich Corsi is a great contact. He's a
15 nationally noted expert in that area.
16 THE WITNESS: Mind if I get some
17 coffee?
18 MR. SIMS: Sure.
19 THE VIDEOGRAPHER: Do y'all want to go
20 off the record?
21 MR. SIMS: Yeah, we can.
22 THE VIDEOGRAPHER: We're going off the
23 record at 11:57.
24 (Recess from 11:57 a.m. to 12:20 p.m.)
25 THE VIDEOGRAPHER: This is Tape 3 of

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1 the deposition. We're back on the record at 12:20.
2 Q. (BY MR. SIMS) Dr. Sattler, I wanted to ask
3 you the same question with respect to an indoor
4 sample, if you can give me an answer. If you assume
5 that someone went out and took an indoor air sample
6 and sent it off, the sample, and had it tested, and
7 then compared that to short-term ESLs and that it
8 didn't -- none of the items tested exceeded any
9 short-term ESL, would your answer be the same, that
10 that test doesn't tell you much?
11 A. Not necessarily. The reason that you have
12 the decrease in concentration with averaging time
13 outdoors is that you get variability in wind
14 direction, and you're likely to have more fluctuations
15 in wind direction over a 24-hour period, so that
16 lowers the concentration that you would measure at a
17 given site. If you're sampling indoors, you don't
18 have wind. You've got an air conditioning system, and
19 I'm -- I'm not sure how that impacts averaging time,
20 or concentration with respect to averaging time.
21 Q. Well, just in terms of drawing
22 conclusions -- I mean, I understood your testimony
23 earlier about the outdoor -- taking one 24-hour sample
24 and comparing that, the results, to the short-term
25 ESLs, if none of them exceed, I gathered from your

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1 testimony earlier that you really can't draw any
2 conclusions from that, meaningful conclusions, can
3 you?
4 A. Right. You may have a problem; you may not
5 have a problem. You don't know.
6 Q. You just cannot draw any meaningful
7 conclusions from that; correct?
8 MR. SMITH: Objection, form. Leading.
9 A. If -- well, as we talked about before, if
10 the concentration, the 24-hour time average
11 concentration exceeded the 1-hour, then you know for
12 certain that you have a problem.
13 Q. (BY MR. SIMS) Let's talk about that for a
14 minute. When you say, "you know for sure you have a
15 problem," I mean, the problem that you would have
16 would be that it exceeds the short-term ESL, whatever
17 that means; right?
18 A. Yeah, and that it -- if -- you would likely
19 have an exceedance -- you would have an exceedance by
20 a large amount, because you -- by taking the sample
21 over 24 hours you've lowered the concentration, and so
22 if you still have an exceedance over 1-hour averaging
23 time, then if you had taken a sample over a 1-hour
24 period, it's a more stringent test. You would have
25 had a -- likely a large exceedance.

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1 Q. Well, you may have or you may not have. I
2 mean, it just depends on how --
3 A. No, no. If -- if the 24-hour concentration
4 exceeds the 1-hour Effects Screening Level, you have
5 an exceedance and you likely have a large exceedance.
6 Q. What if it exceeds by -- by .0001 microgram
7 or whatever?
8 A. Well, again, the fact that you took the
9 sample over the 24 hours means that the 24-hour
10 averaging time decreases any peak values. The
11 concentrations may fluctuate, as we were talking
12 about, on an hourly basis, and if a 24-hour average
13 level exceeds an ESL, then you likely have peaks
14 within that 24-hour period that were really high.
15 Q. But unless you actually test for that, you
16 don't know. You might have had the same amount all 24
17 hours. I mean, that's the average.
18 A. That's true.
19 Q. You could -- so, I mean, it's -- it's just
20 pure speculation to talk about things in a scientific
21 manner when you don't actually have the data to
22 support them, isn't it?
23 MR. SMITH: Objection, form.
24 A. I'd say it's reasoned judgment based on my
25 experience with other sources.

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1 Q. (BY MR. SIMS) Okay. But back to my
2 question: If you take the sample and it doesn't
3 exceed any short-term ESL, there aren't any meaningful
4 conclusions that you can draw from that, are there?
5 A. Outdoor sample.
6 Q. Okay. Are there any meaningful conclusions
7 that you can draw from a 24-hour sample that does not
8 exceed short-term ESLs from an indoor sample?
9 A. I don't know.
10 Q. Do you know enough to know whether, for
11 example, benzene is a compound that is routinely
12 identified in indoor ambient air at a -- at home, at a
13 house?
14 A. I don't know.
15 Q. Do you know if automobiles are a source of
16 benzene emissions?
17 A. Yes.
18 Q. Do you know if gasoline, for example stored
19 gasoline, is a source of benzene emissions?
20 A. At some level, yes.
21 Q. Do you know if there are -- there are any
22 number of products that are commonly used inside
23 people's homes that give off compounds that are
24 routinely tested for in these TO-14 tests that -- that
25 Ms. Rich utilizes?

1 A. No, I don't know for certain.
2 Q. I want to go back to something that -- that
3 I've -- I've tried to understand from you, and I just
4 want to -- I want to ask it this way and just see what
5 your answer is.

6 Is it accurate that the -- that the
7 TCEQ has said, at least as of June of this year, that
8 if you're talking about air quality, you need to be
9 comparing to these Air Monitoring Comparison Values?

10 A. No. They say that if -- it's still true
11 that if you're doing dispersion modeling, you're
12 supposed to compare to the ESLs. Now, they're saying
13 now that if you have ambient monitoring data, then you
14 compare to the ambient monitoring comparison values.
15 But if you're doing modeling, then the ESLs are still
16 the appropriate comparison.

17 Q. Does that make any sense to you? I mean,
18 if -- for example -- I mean, I understand that for
19 permitting purposes, to use ESLs for permitting
20 purposes. But if you're doing a study to try to
21 inform an individual or the public about air quality,
22 why isn't using the Air Monitoring Comparison Values
23 the correct standard if that's what you use for
24 ambient air tests?

25 A. Well, because, as I explained here

1 source that you were supposedly testing for?

2 A. Yes, that's possible.

3 Q. Did you do anything, you or Ms. Rich or
4 anybody do anything to eliminate or to rule out any
5 other potential sources in these reports that you did?

6 A. The -- the locations -- let's see -- were
7 such that having large sources of other pollutants was
8 not likely.

9 MR. SIMS: Well, I object to the
10 responsiveness of your answer.

11 Q. (BY MR. SIMS) I'm simply asking you --

12 A. Well, okay --

13 Q. -- did you undertake any scientific inquiry
14 or methodology to rule out any other potential sources
15 of atmospheric compounds?

16 A. No, but I have 14 years of professional
17 experience dealing with air quality sources, and if
18 you're out in the middle of an open field with nothing
19 around, you know, we don't have infinite amounts of
20 time and money, and it doesn't make sense to go
21 looking for sources that any rational, common person
22 would see are not there.

23 Q. Are all --

24 A. Yeah, there's some small probability that
25 maybe a little bit of the compounds came from another

1 (indicating), when you're doing modeling you're
2 looking typically at what's coming from one source.
3 In the real world, you might have multiple sources
4 that contribute to air pollution in that area. And so
5 if you're doing modeling, you're just looking at that
6 one source. So to be protective of human health they
7 set the ESL values lower, because by the time you add
8 in the contributions from other sources, you could
9 have more of a pollutant in the air.

10 Q. Let's talk about that for a minute. These
11 air modeling studies that you did, as I understand it,
12 you actually collected your air samples some distance
13 away from the source of emission; is that --

14 A. Yeah. I didn't collect the air samples.
15 Alisa collected the air samples. But that goes back
16 to the reason we've talked about, greatest thing would
17 have been for us to have had access to the compressor
18 station and been able to monitor directly what was
19 coming out of the stack. We didn't have that access,
20 and so she had to collect the samples some distance
21 away.

22 Q. And by collecting the samples some distance
23 away from the source of the emission that you were
24 focusing on, isn't it possible that the sample
25 collected emissions from other sources, other than the

1 source, but ...

2 Q. Let's -- let's throw in another variable,
3 then, since that doesn't seem that important. What
4 if -- what if the site that you're testing for is
5 downwind from where the sample is, the canister, does
6 that create any problems for your methodology or
7 study?

8 A. That would be taken account -- into account
9 in the studies that I did, because the 24 hours' worth
10 of meteorological data takes into account conditions
11 where you have the wind blowing different ways.

12 Q. Let's assume that over the 24-hour period
13 that the -- that the sample is collected that the wind
14 is blowing down -- the site that you're testing for is
15 downwind and the wind is blowing all 24 hours from the
16 canister towards the site, away -- away from the
17 canister. So in other words, it's -- the site is
18 downwind from the canister all 24 hours. Whatever
19 compounds you collect in that canister, isn't it
20 reasonable under those conditions, under that
21 assumption, that some or possibly all of those
22 compounds came from some source other than the site
23 that you're testing for?

24 MR. SMITH: Objection, form.

25 A. There's two primary methods of transport in

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1 **the atmosphere: advection and dispersion. Advection**
2 **is transport of pollutants with the main wind flow,**
3 **which is what you're talking about. You could still**
4 **have pollutants transported from the site to the**
5 **canister via dispersion, even if the wind was blowing**
6 **a constant direction for 24 hours.**
7 MR. SIMS: Objection, nonresponsive.
8 Q. (BY MR. SIMS) If the wind is blowing --
9 **A. No, it wasn't nonresponsive. I'm explaining**
10 **the science to you.**
11 Q. Okay. Well, let --
12 MR. SMITH: Well, and just the process,
13 he gets to object to the -- what he thinks is
14 nonresponsive. That doesn't -- a judge can decide
15 later whether or not it is. So --
16 Q. (BY MR. SIMS) If you'll listen to my
17 question. My question is:
18 If the wind is blowing downwind from
19 the canister and the site is downwind from the
20 canister --
21 **A. Yes.**
22 Q. -- is it reasonable to believe that whatever
23 compounds you got in your air test over that 24-hour
24 period came -- at least some of them came from some
25 source other than the downwind site?

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1 MR. SMITH: Objection, form. Asked and
2 answered.
3 **A. You don't know.**
4 Q. (BY MR. SIMS) Thank you.
5 And as a professor at the University of
6 Texas at Arlington who believes in intellectual
7 honesty, if someone presented you a report where those
8 were the facts, you would -- you would have serious
9 questions about the reliability of whatever data or
10 conclusions they were reaching in that report,
11 wouldn't you?
12 **A. Well, as a professor with intellectual**
13 **honesty, I know that the wind doesn't blow from**
14 **exactly the same direction continually for a 24-hour**
15 **period.**
16 Q. The only way to know which way the wind is
17 blowing is to -- is to set up a weather station right
18 there and collect the data. That's what a good
19 scientist would do, isn't it?
20 MR. SMITH: Objection, form.
21 **A. If you have a weather station and you have**
22 **the money, yeah.**
23 Q. (BY MR. SIMS) Do you ever -- have you ever
24 known of this or heard of this air modeling that
25 you've done in these three instances to ever have been

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1 accepted by a court as scientifically reliable
2 information?
3 **A. No, but I haven't tried to find that out. I**
4 **haven't tried to find out whether it's been used in a**
5 **court and what they thought of it.**
6 Q. Isn't it true that in the -- in the air
7 modeling that you do, there are literally hundreds, if
8 not thousands, of variables that go into the computer
9 program?
10 **A. But we've -- we talked about the main**
11 **variables already: the emission rates and the**
12 **meteorology, including wind direction, wind speed,**
13 **mixing height, stability and temperature.**
14 Q. And if any of those variables change, the
15 outcomes in the program change.
16 **A. They change by a certain amount. We've**
17 **talked about the accuracy of the models being, you**
18 **know, somewhere around 20 percent. So errors in the**
19 **input could cause a -- I've seen some studies that**
20 **show maybe like a 5 percent, 10 percent difference in**
21 **the results.**
22 **But, again, if you read my studies, the**
23 **Effects Screening Levels were exceeded by factors of**
24 **hundreds, or even in some cases thousands. So a 20**
25 **percent change in results doesn't -- doesn't change**

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1 **the big picture overall conclusion.**
2 **(EXHIBIT(S) NO. 11 MARKED.)**
3 Q. (BY MR. SIMS) Let me show you what I've
4 marked as Exhibit 11 to your deposition, which is a
5 document from the TCEQ dated August 14, 2009.
6 Have you ever seen this document
7 before?
8 **A. Not that I distinctly remember, but I**
9 **wouldn't absolutely swear to it.**
10 Q. If you would turn over to the second page of
11 the document, and, if you will, I'm going to -- I'll
12 read this and you follow along with me, and I just
13 want to get your -- your thoughts about this, whether
14 you -- whether you agree, disagree or just don't know,
15 okay?
16 **A. Okay.**
17 Q. Beginning with the first full sentence up
18 there on page 2, it says, "TICs are observed
19 measurements in the sample for which the gas
20 chromatograph-mass spectrometer (GC/MS) was not
21 specifically calibrated."
22 Do you see that statement?
23 **A. Yes.**
24 Q. Do you have any reason to disagree with that
25 statement?

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1 A. No, but as we discussed earlier, I really
2 haven't talked to a testing lab about how they
3 identify TICs.
4 Q. Okay. And a TIC stands for "tentatively
5 identified compound"; correct?
6 A. Right.
7 Q. Moving on. It says, "The tentative
8 identification of a compound is made by comparing its
9 mass spectrum from the environmental sample to a
10 computerized library of mass spectra."
11 Do you see that statement?
12 A. Yes.
13 Q. Do you have any reason to agree with that,
14 disagree with that, or do you know?
15 A. Just on face value it sounds like that's
16 reasonable, but I -- like I said, I haven't talked to
17 a testing lab, so I don't know for certain.
18 Q. It goes on to say, "The library of spectra
19 are scored for their similarity to the mass spectrum
20 of the TIC and the tentative identification is made
21 based on the most similar spectra."
22 Do you see that statement?
23 A. Yes.
24 Q. Do you know if that's an accurate statement?
25 A. No.

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1 Q. Then it goes on to say, "Therefore, the
2 identity of a TIC is uncertain."
3 Did I read that statement correctly?
4 A. Yes.
5 Q. Do you have any reason to disagree with that
6 statement from the TCEQ?
7 A. No. I don't know whether it's correct or
8 not. Like I said, I haven't talked to a testing lab
9 to see what their procedure is for TICs.
10 Q. Do you know who Shannon Ethridge is in the
11 Toxicology Division of the Chief Engineer's Office?
12 A. No.
13 Q. Do you know if she's competent?
14 A. I -- I do not know. I -- I would hope.
15 Q. Reading on, it says, "Quantifying TICs is
16 also less accurate than for target compounds because
17 the true relative response factor is not known, since
18 the instrument was not calibrated for the TIC."
19 Do you see that statement?
20 A. Yes.
21 Q. "It is important to note these uncertainties
22 when evaluating TICs."
23 Do you see that statement?
24 A. Yes.
25 Q. Would you agree with that statement?

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1 A. If everything preceding in the paragraph is
2 true, then the last sentence would be true. Like I
3 said, I haven't talked to a testing lab to -- to
4 confirm this information.
5 Q. Notwithstanding the fact that you issued
6 reports that included these TIC data, but you didn't
7 say anything in your reports about the uncertainties
8 of TICs as to identification or quantity.
9 A. Like I said, I assumed that when my section
10 was put with the full report that the lab data would
11 be included, and those compounds are identified
12 clearly as TICs in the lab data.
13 Q. Do you think it's intellectually dishonest
14 to attempt to draw conclusions from data that are
15 uncertain both as to the identity and the quantity?
16 A. Not necessarily. It depends on the details.
17 If the uncertainty means that there's a 5 percent --
18 5 percent level of uncertainty, then, yeah, you should
19 report that there's a 5 percent level of uncertainty,
20 but that likely doesn't change the overall conclusions
21 of the -- of the report. I would have to have more
22 information about the levels of uncertainty.
23 Q. But you've never even made that inquiry?
24 A. No. I will, and after today if I do any
25 more reports that have tentatively identified

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1 compounds, I will put up front in the report these
2 were the compounds that were identified for certain,
3 these were tentatively identified, and I'll find out
4 from somebody what TIC means from a testing lab.
5 But like I said, there was no attempt
6 to try to -- try to not tell people that, because it
7 was my understanding that my dispersion modeling was
8 going to be put into a full report that would have the
9 test data, and the test data clearly identifies those
10 compounds as TICs, from the lab.
11 Q. I want to refer you to this document,
12 Exhibit 10, that you brought with you today that you
13 indicated was faxed over to you by Mr. Smith
14 yesterday. So, if you will, I noted that you've
15 underlined some things in that document. Can you tell
16 me what you underlined in there?
17 A. I underlined some of the compounds that were
18 identified in the inside air testing and the outside
19 air testing.
20 Q. And why did you do that?
21 A. I almost always underline when I read things
22 just to kind of highlight important points.
23 Q. Did you draw any conclusions from your
24 underlining or looking at that on the inside air
25 testing and outside air testing?

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1 A. No.
2 Q. What else did you underline?
3 A. **I underlined the -- the methane**
4 **concentration values being 2.3 ppmv and 2.7 ppmv, and**
5 **"reasonable scientific probability" and "inside" and**
6 **"outside."**
7 Q. Look at -- if you will, look at the page of
8 her report, I think it's about the fourth page, it
9 starts with the paragraph 7.0, it says, "Discussion."
10 A. Yes.
11 Q. Do you see that?
12 A. Yes.
13 Q. Says, "The presence of neurotoxicants in
14 concentrations above ambient levels was identified
15 through laboratory results."
16 Did I read that correctly?
17 A. Yes.
18 Q. Do you know -- do you know what she's
19 talking about there when Alisa Rich says, "The
20 presence of neurotoxicants," what she's referring to?
21 A. **I don't know specifically. It would be**
22 **these compounds here that have a neurological effect.**
23 **They're all, in general, called air toxics. But I**
24 **assume you could get on the Internet and find out**
25 **which ones had neuro impacts.**

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1 Q. But you don't know?
2 A. No.
3 Q. And when she -- when she says "ambient
4 levels," "The presence of neurotoxicants in
5 concentrations above ambient levels," what's she
6 referring to there; do you know? Did you gather that
7 from reading this yesterday?
8 A. No.
9 Q. Is -- is an ESL an ambient level?
10 A. **No. Well, it's a -- it's a value that TCEQ**
11 **has come up with that you compare dispersion modeling**
12 **results to, to see whether you may have health**
13 **impacts.**
14 Q. But you know there wasn't any dispersion
15 model done in this case; correct?
16 A. Yes. **"Ambient" just means outside, means**
17 **like in the atmosphere.**
18 Q. Normal levels?
19 MR. SMITH: Objection, form.
20 A. **Not necessarily. Just means whatever the**
21 **concentration outside is.**
22 Q. (BY MR. SIMS) So -- so if you say that,
23 "The presence of neurotoxicants in concentrations
24 above ambient levels was identified through laboratory
25 results," that's a nonsensical statement, isn't it?

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1 If -- if the ambient level is just whatever it is, to
2 say that it's above that level is just nonsense.
3 MR. SMITH: Objection, form.
4 Q. (BY MR. SIMS) Correct?
5 A. **Well, the sentence is not clear to me.**
6 Q. Reading on down, she starts talking about
7 TCEQ ESLs; correct?
8 A. Yes.
9 Q. But you certainly don't equate ESLs with
10 ambient air levels, do you?
11 A. **Well, we've already talked about this, that**
12 **until about six months ago ESLs were used for**
13 **comparing ambient monitoring data to.**
14 Q. But at the time this report was written,
15 that was not the case, was it?
16 A. **Well, we've already talked about this. If**
17 **you believe that the AMCVs are valid.**
18 Q. So does this all just come down to the
19 subjective belief of whoever is putting the report
20 together?
21 MR. SMITH: Objection, form.
22 A. **No. I think it would be appropriate to talk**
23 **to some of the toxicologists at TCEQ to try to find**
24 **out why did they use Effects Screening Levels for**
25 **comparing ambient monitoring data to -- for 20, 30**

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1 **years, however long they've been in existence, if that**
2 **was not appropriate. So what is their rationale for**
3 **now all of a sudden coming up with this idea of AMCVs?**
4 **Why didn't they do it 20, 30 years ago? But need to**
5 **have more information.**
6 Q. (BY MR. SIMS) Which you don't have.
7 A. **Right. I haven't tried to contact their**
8 **staff to -- to find out the details there.**
9 Q. Do you know if Alisa Rich has contacted
10 anybody to find out the details?
11 A. **I don't know.**
12 Q. Do you see the -- the next-to-last sentence?
13 It says, "ESLs are based on data concerning health
14 effects, odor/nuisance potential and effects on
15 vegetation."
16 A. Yes.
17 Q. And then the next sentence says, "These
18 levels are indicators at which exposure to chemicals
19 above identified level concentrations can cause
20 adverse human health effects."
21 A. **Yeah.**
22 Q. Does that sentence make sense to you?
23 A. Yes.
24 Q. Okay. When it says, "These levels," what
25 levels do you believe that's referring to?

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1 A. ESLs.
2 Q. Okay. So ESLs are indicators at which -- so
3 if you're at the ESL level; right?
4 A. **(Moving head up and down.)**
5 Q. Right?
6 A. **(Moving head up and down.)**
7 Q. Yes?
8 A. **(Moving head up and down.)**
9 Q. Yes?
10 A. Yes.
11 Q. Which you've already said the TCEQ said is
12 safe; correct?
13 A. Yes.
14 Q. Okay. So, "These levels," which she's
15 referring to ESLs, "are indicators at which exposure
16 to chemicals above identified level concentrations can
17 cause adverse human health effects."
18 So -- so the "above identified level
19 concentrations," what -- what -- what is she referring
20 to there; do you know? How far above? What -- what
21 level do you have to get to before something can cause
22 an adverse human health effect?
23 A. **Oh, I would assume any level above the ESL.**
24 Q. Based on what she wrote here; correct?
25 A. **Well, based on just my understanding of**

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1 ESLs.
2 Q. Well, didn't you say earlier in your e-mail
3 that the ESLs were 70 percent lower than what they
4 would be to expect any adverse human health effect?
5 A. **Yeah, that is true, according to the**
6 **document that came out with ACMVs [sic].**
7 Q. Which -- and you're looking at your Exhibit
8 9; right?
9 A. **Or AMCV. Yeah.**
10 Q. So this sentence as worded just doesn't
11 really make any sense, does it?
12 MR. SMITH: Objection, form.
13 A. **Well, I think, again, you would have to go**
14 **to TCEQ and really ask them about how they changed to**
15 **the AMCVs and why.**
16 Q. (BY MR. SIMS) Well, I'm just asking you as
17 you sit here today, this sentence in her report that
18 says, "These levels are indicators at which exposure
19 to chemicals above identified level concentrations can
20 cause adverse human health effects."
21 A. **That's the way we had always used them until**
22 **six months ago, yes.**
23 Q. Had you ever done any studies to determine
24 at what level any particular compound could cause an
25 adverse human health effect?

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1 A. **No. That's not my area. That's a**
2 **toxicologist.**
3 Q. So if you -- if you put out there in the
4 public domain that some level above an ESL could cause
5 an adverse human health effect, you really didn't have
6 any data to support that.
7 A. **TCEQ has data. I can't personally go redo**
8 **studies that people have spent their entire careers**
9 **doing. No telling how many thousands of scientists**
10 **have done these studies to come up with these values**
11 **of -- at which health impacts may occur. It's**
12 **unreasonable to expect every scientist or engineer to**
13 **go re-produce those studies. I wouldn't have enough**
14 **time. It would take thousands of careers to do that.**
15 Q. Have you ever seen any studies by the TCEQ
16 that say that -- that a level at the ESL poses a
17 health risk?
18 A. **No, but I haven't specifically gone and**
19 **looked for it.**
20 Q. My question is simply this:
21 If an ESL is safe, what studies have
22 you ever seen that show at what level above the ESL
23 you have to get to for any particular compound before
24 it becomes unsafe to humans?
25 MR. SMITH: Objection, form.

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1 A. **I haven't gone and looked for those studies.**
2 Q. (BY MR. SIMS) Do you even know if they
3 exist?
4 A. **They likely do exist. The toxicologists**
5 **that do that type thing, I know in some studies look**
6 **at whether there's a safe threshold. So they would**
7 **look for a level at which health impacts occur.**
8 **Again, I'm not a toxicologist, I don't do those type**
9 **of studies.**
10 Q. You don't know if there's anything in this
11 report that -- that would pose a health risk to
12 anybody, do you, at the levels found?
13 A. **Well, I had a little difficulty reading the**
14 **numbers in the table here on my fax copy, but it -- it**
15 **looks like the -- the carbon disulfide, the dimethyl**
16 **disulfide and the diethyl trisulfide exceeded the**
17 **short-term ESLs.**
18 Q. Okay.
19 A. **Although those ESLs are based on odor, so**
20 **you would have to look at some toxicological data to**
21 **see what the level is at which there would be health**
22 **impacts.**
23 Q. Which would be higher than the odor level.
24 A. **Yes. But as we've talked about, you're**
25 **comparing 24-hour averages to 1-hour averages. And by**

1 virtue of the fact that you're taking a 24-hour
2 sample, that typically that decreases the
3 concentration. And so if you have a 24-hour sample
4 that exceeds the 1-hour ESL, then you've really got a
5 problem.

6 Q. Well, let's -- let's talk about that,
7 because I think when I read through this the first
8 time, I -- I kind of had the same impression you did,
9 that you just now testified about, and I want to go
10 through that.

11 The chart you're looking at is a chart
12 that talks about tentatively identified compounds;
13 right?

14 A. Yes.

15 Q. And there's nothing in Ms. Rich's written
16 report that talks about the uncertainty of tentatively
17 identified compounds, either as to the identity of
18 them or as to the quantity of them, is there?

19 A. Well, the identity, they're listed here and
20 the quantity is listed.

21 Q. I know that's a -- that's a nice response to
22 my question. My question was, though, there's
23 nothing --

24 MR. SMITH: Object to side-bar.

25 Q. (BY MR. SIMS) -- there's nothing in writing

1 Q. Do you have any -- do you feel like you have
2 a need to defend her work?

3 A. No.

4 Q. Well, let's look at this, since you said it
5 appeared to you that the carbon disulfide exceeded the
6 short-term ESL, and you're looking -- and -- and I
7 guess if we look at parts per billion, on the inside
8 canister it was 7.03; right?

9 A. If you have a better copy than I do, I had
10 to try to look up the numbers on the back pages and
11 write them on here.

12 (Sotto voce discussion.)

13 MR. SMITH: I've got one.

14 MR. SIMS: If you don't mind, just let
15 her look at that chart.

16 MR. SMITH: Why don't we just throw a
17 sticker on that.

18 MR. SIMS: We'll just mark this one as,
19 what have we got?

20 MR. SMITH: 13? 12?

21 MR. SIMS: Where are those stickers?
22 We have 12. Maybe this one will be a little clearer
23 for you.

24 (EXHIBIT(S) NO. 12 MARKED.)

25 Q. (BY MR. SIMS) If you will, find that chart

1 in this report that talks about the uncertainty of the
2 identity or quantity of tenta -- tentatively
3 identified compounds, is there?

4 A. No, but that doesn't mean you can totally
5 write it off without talking to the lab and finding
6 out what kind of uncertainty there is because they
7 obviously have some means of identifying these
8 compounds. And so if it's that there is, say, a 5
9 percent uncertainty, then -- you know, or is it a 50
10 percent uncertainty. You need to find that out, you
11 can't -- before you totally just write off the data.

12 Q. Well, to be intellectually honest, you --
13 you really ought to -- you really ought to disclose
14 all the limitations of your report, shouldn't you,
15 right up front?

16 A. Well --

17 MR. SMITH: Objection, form.

18 A. -- she did identify these as tentatively
19 identified compounds.

20 Q. (BY MR. SIMS) Okay.

21 A. It's not like she was trying to hide that.
22 It's right here.

23 Q. Are you -- are you here today defending
24 Ms. Rich and her work?

25 A. No.

1 in there and see if that's a little more readable.

2 A. Yes.

3 Q. Okay. Now, if you look at carbon disulfide,
4 I think what you're -- what you've just told me is, is
5 that it appears that the -- both the inside and
6 outside results exceed the TCEQ short-term ESL; right?

7 A. Yeah. I was particularly looking at the
8 outside number.

9 Q. Well, they both appear to exceed it; right?

10 A. Yeah.

11 Q. And that's because, when you look at the
12 TCEQ short-term list that she's got down there, what
13 does she have in that column for that, for the parts
14 per billion?

15 A. 20. Oh, micrograms per meter-cubed. Parts
16 per billion is 5.

17 Q. And we can go check what that number
18 actually is, can't we?

19 A. Yes.

20 Q. Yeah. And if that number is wrong in her
21 chart, then her conclusion is wrong. If it's really
22 10 -- let's say that the short-term -- and we're not
23 going to go through the trouble to go look it up, but
24 let's say the short-term ESL is really 10, not 5 --

25 A. Uh-huh.

1 Q. -- on parts per billion, neither one of them
2 exceed that, do they?
3 A. Well, this goes back to the issue of the
4 difference in averaging times. Where she had a
5 24-hour sample, the ESL is for a 1-hour averaging
6 time, and so if you don't have an exceedance, you
7 don't really know whether you have a problem or not,
8 because within that 24-hour time span you may have had
9 hours that did exceed. So then you're in a situation
10 where you don't know.
11 Q. Okay. So if the number is really 10 for the
12 short-term ESLs, parts per billion, and not 5 as she
13 reported, then we really don't know, we just can't
14 draw any conclusions from that one way or the other,
15 can we?
16 A. Right.
17 Q. Now, let's look down at the next one. On
18 the parts per billion we have 3.61 on the inside
19 result and 4.46 on the outside result. Both of those
20 are below the 5 that she reports on the parts per
21 billion on the short-term; correct?
22 A. Yes.
23 Q. Do you know why she would say that
24 concentrations of carbon disulfide and dimethyl
25 disulfide found in this test exceed TCEQ short-term

1 carbon disulfide parts per billion short-term is 10
2 and not 5 as she reported, and that these others, that
3 one doesn't exist and the -- and the other one is, as
4 we've looked at, does not exceed it, can you imagine
5 how in the world she says that concentrations of
6 carbon disulfide, dimethyl disulfide and diethyl
7 trisulfide found in these tests exceed TCEQ short-term
8 ESLs?
9 A. Well, what rationale would you have for the
10 ESL being 10 instead of 5?
11 Q. Based on a publication by the TCEQ. I think
12 the question would be why would she put it at 5 when
13 it's really 10?
14 A. Well, is that the ESL?
15 MR. SMITH: Objection, form.
16 A. It may be than the AMCV is 10, but she's
17 clearly labeled her column here as an ESL.
18 Q. (BY MR. SIMS) Right. And if it's not 5 and
19 it's really 10, that's just pure misleading, isn't it?
20 MR. SMITH: Objection, form.
21 A. It would be a mistake, yes.
22 Q. (BY MR. SIMS) I guess it would depend on
23 the motivation of the person that put it in there,
24 wouldn't it, whether it was a mistake or whether it
25 was just intentionally misleading?

1 ESLs?
2 A. Okay, yes. She -- she shouldn't have said
3 that, because that's a situation where you really
4 don't know, because of the differences in the
5 averaging times.
6 Q. Okay. Let's look on down at the next one.
7 She's got this dimethyl trisulfide. Do you see those
8 little brackets around those numbers?
9 A. Yes.
10 Q. Do you know what that means?
11 A. No.
12 Q. Well, if -- if it means that, or what I
13 think it means is that there are no ESLs for that
14 compound, do you think it's intellectually dishonest
15 to report that concentrations of diethyl trisulfide
16 exceed TCEQ short-term ESLs --
17 MR. SMITH: Objection, form.
18 Q. (BY MR. SIMS) -- if there are no ESLs for
19 it?
20 A. Yeah, she should have noted that these were
21 in brackets because they were assumed based on a
22 similar compound.
23 Q. She didn't say that in her report, did she?
24 A. No.
25 Q. So if you take my word for it that the

1 A. Yeah.
2 Q. Now, you've told me earlier that it's just
3 inappropriate to take a 24-hour sample and compare
4 that to long-term ESLs.
5 MR. SMITH: Objection, form.
6 Q. (BY MR. SIMS) I mean, that's what you've
7 told us.
8 MR. SMITH: Objection, form.
9 Q. (BY MR. SIMS) Correct?
10 A. Yes.
11 MR. SMITH: Objection, form. Leading.
12 Q. (BY MR. SIMS) And you -- you know, you've
13 read enough to understand that this report that
14 Ms. Rich prepared in this case is based on a 24-hour
15 sample; right?
16 A. Yes.
17 Q. Do you know how she derives these so-called
18 TCEQ long-term ESLs in terms of purported exceedances
19 of long-term ESLs in here?
20 A. What do you mean, derives them? If you want
21 the -- the TCEQ long-term ESL values, they're
22 available on the TCEQ website.
23 Q. Well, let me ask it another way. Do you
24 know why this TCEQ long-term report or chart is even
25 included in here, when it's inappropriate to compare

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1 what she did to those values?
2 MR. SMITH: Objection, form.
3 **A. If it were me writing the report, I wouldn't**
4 **have put it in there.**
5 Q. (BY MR. SIMS) Because it's inappropriate to
6 compare them.
7 MR. SMITH: Objection, form.
8 **A. Well, in a sense, you don't have an**
9 **appropriate value to compare to, because you don't**
10 **have a 24-hour. So she's compared the two existing**
11 **values that are there, a one hour and an annual.**
12 Q. (BY MR. SIMS) You're aware of a lot of TCEQ
13 data that says that it's -- it's simply inappropriate
14 to compare a 24-hour sample to long-term ESLs, aren't
15 you?
16 **A. Well, what --**
17 MR. SMITH: Objection, form. Leading.
18 **A. What you're supposed to do is compare two**
19 **like averaging times. So if you're comparing to a**
20 **long-term ESL, that's a 1-year averaging time. So**
21 **you're supposed to have 1-year number averaging time**
22 **for your data that you're comparing to. For a 1-hour**
23 **you're supposed to have 1-hour data, because, again,**
24 **concentrations decrease as a function of averaging**
25 **time because of the fact that the wind direction**

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1 **varies, and the -- the longer the averaging period,**
2 **the more variations in wind direction you have. And**
3 **so the -- the appropriate thing is to compare 1-hour**
4 **data to the 1-hour ESL and compare annual data to the**
5 **annual ESL.**
6 **And I think just -- she took the**
7 **24-hour sample because she was trying to capture more**
8 **variation in emissions, potentially, than a 1-hour**
9 **sample would have, but there's unfortunately not a**
10 **24-hour ESL to compare it to.**
11 Q. (BY MR. SIMS) Is that what she told you, is
12 that why she did the 24-hour instead of a 1-hour?
13 **A. She didn't tell me that on this study in**
14 **particular, but she said that, in general, because a**
15 **24-hour, it's a longer period and so you are likely to**
16 **capture more variability in terms of emissions.**
17 Q. How do you -- how do you take a 24-hour
18 sample and come up with an annualized average from
19 that sample?
20 **A. There is a way to do that, but I don't think**
21 **she's done that in this report.**
22 Q. Well, look at -- do you see the page that's
23 got "8.0 Conclusion" on there, in her written report?
24 **A. Yeah.**
25 Q. Go one page beyond that. She talks about

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1 these compounds exceeding "TCEQ Short Term ESLs on an
2 annualized averaging basis."
3 That's just nonsense, isn't it?
4 **A. I don't know what that means.**
5 MR. SMITH: Objection, form.
6 Q. (BY MR. SIMS) Then she goes on and talks
7 about some others found in this test "exceed TCEQ Long
8 Term ESLs on an annualized averaging basis."
9 That's nonsense, too, isn't it?
10 MR. SMITH: Objection, form.
11 **A. Well, like I said, there is an equation to**
12 **convert concentrations among different averaging**
13 **times, but I don't think that was used in this**
14 **particular report.**
15 Q. (BY MR. SIMS) It would be -- it's
16 intellectually dishonest to talk about these compounds
17 taken from a 24-hour test exceeding TCEQ long-term
18 ESLs on an annualized averaging basis, isn't it?
19 MR. SMITH: Objection, form.
20 **A. I don't know that it's intellectually**
21 **dishonest. I would like to -- to clarify the**
22 **sentence, because I don't understand it.**
23 MR. SMITH: Andy, I've got to run down
24 the hall. We can just stop and stay in the room, but
25 I've got to run down the hall.

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1 MR. SIMS: Yeah, that's fine.
2 THE VIDEOGRAPHER: Going off the
3 record --
4 MR. SIMS: Do you need to take a break
5 now?
6 THE WITNESS: That would be great.
7 THE VIDEOGRAPHER: Going off the record
8 at 1:22.
9 (Recess from 1:23 p.m. to 1:30 p.m.)
10 THE VIDEOGRAPHER: This is Tape No. 4
11 of the deposition. We're back on the record at 1:30.
12 Q. (BY MR. SIMS) Looking back at the Alisa
13 Rich report that we've been looking at. I think
14 that's Exhibit 12 to your deposition. It's dated
15 August of 2010, Dr. Sattler. In the -- in the
16 paragraph that begins with "7.0 Discussion" --
17 **A. Okay.**
18 Q. -- the middle paragraph there where it says,
19 "Based on reasonable scientific probability, the
20 laboratory results identify compounds that exceed TCEQ
21 ESLs for Short Term exposure and Long Term exposure
22 for July 30, 2010."
23 Do you see that statement?
24 **A. Yes.**
25 Q. Did I read that correctly?

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1 A. Yes.
2 Q. Based on the fact that there's not one
3 single compound that she identified that actually
4 exceeds any short-term ESL, and given the fact that
5 it's improper or inappropriate to compare what she did
6 to long-term ESLs, that's just a misleading statement,
7 isn't it?
8 MR. SMITH: Objection, form.
9 A. **The long-term part, I would agree, is**
10 **misleading. The short-term part, the carbon disulfide**
11 **number as given in the report here in ppb is 5, and**
12 **the measurement was 8.88 outside, and so that is an**
13 **exceedance.**
14 Q. (BY MR. SIMS) If you assume 5 is correct.
15 A. **Right.**
16 Q. If it's really 10, then it's not an
17 exceedance.
18 A. **It's not an exceedance, but you have the two**
19 **differences in averaging times. One is 24-hour and**
20 **the other is 1-hour. So given that the 8.88 is close**
21 **to 10, you likely actually did have an exceedance of**
22 **the 1-hour. But you don't know that for sure. Like**
23 **I -- like we've been talking about, you can't say --**
24 **you can't say for sure one way or the other.**
25 **Your -- well, yeah, it's the same thing**

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1 **for dimethyl disulfide, in terms of the short term**
2 **you're really close, 4.46 versus 5. And so**
3 **considering that one was a 24-hour averaging time and**
4 **the other is a 1-hour, you probably did have**
5 **exceedances within that 24-hour period, but you don't**
6 **know absolutely for sure.**
7 Q. But those -- all these things you're talking
8 about are odor-based --
9 A. **In --**
10 Q. -- ESLs; right?
11 A. **That is true.**
12 Q. And so, I mean, there's no way to know from
13 this data whether any of this stuff has ever created
14 an odor or not, is it, that anyone could detect?
15 A. **Well, there's reasonable scientific**
16 **probability that it has.**
17 Q. How far away?
18 A. **I don't know that. You run a dispersion**
19 **model to -- to tell that.**
20 Q. So if you haven't run a dispersion model for
21 odor, there's no conclusions you can draw from this
22 about what any odor might be --
23 A. **Well, like --**
24 Q. -- 750 feet away, a thousand feet away?
25 A. **Well, like I said, this 4.46 over a 24-hour**

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1 **averaging time is so close to the 5 1-hour value that,**
2 **you know, I would say I would be 99 percent certain**
3 **that at some point you had a 1-hour exceedance**
4 **somewhere.**
5 Q. And so if there was a 1-hour exceedance,
6 what would be the effect of that?
7 A. **You'd have an odor for that one hour.**
8 Q. Well, how much over the ESL would you have
9 to get before you had an odor?
10 A. **Well, that's subjective. The way they do**
11 **the odor studies, they have a panel of people that**
12 **actually smell different concentrations of compounds.**
13 **And so you can have people that could actually smell**
14 **odors at a more sensitive level, but then if the**
15 **person doesn't have a sensitive nose, it -- they may**
16 **not detect the odor even at the ESL. So I don't think**
17 **you can make the blanket statement that this shows**
18 **that nobody has ever smelled an odor.**
19 Q. Well, if the Laws have said in writing that
20 they have never smelled an odor, that would be
21 pretty -- I mean, you wouldn't discredit that or
22 disbelieve that, would you?
23 MR. SMITH: Objection, form.
24 A. **Well, that means they haven't smelled an**
25 **odor.**

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1 Q. (BY MR. SIMS) Okay.
2 A. **I mean, I'd take their word for it, but --**
3 **like I said, some people can't detect -- if they have**
4 **a less sensitive nose, they wouldn't necessarily**
5 **detect the odor at the ESL.**
6 Q. Well, what I'm focusing on is her sentence
7 here. It says, "Based on reasonable scientific
8 probability, the laboratory results identify compounds
9 that exceed TCEQ ESLs for Short Term exposure and Long
10 Term exposure for July 2010."
11 Correct? That's what she says.
12 A. **Okay. Where are you?**
13 Q. Same sentence, middle paragraph, 7.0.
14 A. **Okay.**
15 Q. First sentence there.
16 A. **Yes.**
17 Q. I mean, the truth is the laboratory results
18 did not identify any compound that exceeded TCEQ ESLs
19 for any short-term or long-term exposure, did it?
20 MR. SMITH: Objection, form. Leading.
21 A. **If you interpret that narrowly, yes. But**
22 **the qualifier is there at the beginning of the**
23 **sentence, "Based on reasonable scientific**
24 **probability," and as we -- we've talked about, you've**
25 **got this mismatch in the averaging times, the 24-hour**

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1 versus the 1-hour; and given that the 24-hour sample
2 was so close to the 1-hour level, you likely did have
3 hours within that 24-hour time frame that exceeded the
4 TCEQ. But it would have been better if that had all
5 been discussed and spelled out more clearly.
6 Q. (BY MR. SIMS) Look at the next sentence of
7 this report. It says, "Based on reasonable scientific
8 probability, it is anticipated that an AERMOD computer
9 generated dispersion model may indicate that multiple
10 compounds may exceed TCEQ ESLs for Short Term exposure
11 and Long Term exposure on an annualized basis."
12 Do you see that?
13 A. Yes.
14 Q. Do you know what reasonable scientific
15 probability is?
16 A. I don't think anybody knows that,
17 absolutely.
18 Q. I mean, isn't -- isn't all this just
19 conjecture?
20 MR. SMITH: Objection, form.
21 Q. (BY MR. SIMS) I mean, talking about "it's
22 anticipated," that it "may indicate," that they "may
23 exceed" --
24 A. Well --
25 Q. -- on this basis or that basis, when you

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1 haven't even done -- run the thing?
2 MR. SMITH: Objection, form.
3 A. It is conjecture, but if you look at the
4 three studies that I've brought here, they have all
5 shown exceedances of short-term and long-term ESLs
6 when you look at the year's worth of meteorological
7 data. And so it's likely that if we had run a
8 dispersion modeling study on this data, we would have
9 gotten the same result as in the other three studies,
10 and I think -- to me, that's what that -- that's what
11 that sentence is trying to convey.
12 Q. (BY MR. SIMS) Well, what's the point in
13 actually running it if you know going in that, well,
14 it's just going to -- we're going to get one hour in
15 there in a year somewhere that's going to exceed that
16 short-term ESL, which is essentially, as I understand
17 it, what -- what your report shows?
18 A. Well, that's a misrepresentation. The
19 annual average exceeds the ESL, which means that --
20 one thing that I -- that I didn't do, that I have
21 should have done was gone through and had the software
22 tell me the number of hours that the 1-hour ESL was
23 exceeded. But to get an annual average that exceeds
24 the long-term ESL, it was many, many hours. It was
25 more than one. It was hundreds, most likely.

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1 Q. Well, until you actually run the -- run the
2 program, you don't know whether something is going to
3 exceed on an annualized basis, do you?
4 MR. SMITH: Objection, form.
5 A. I did. It's in the reports.
6 Q. (BY MR. SIMS) Well, I'm talking about in
7 this -- in this situation, where she's -- she's
8 speculating on, well, if we run it, it may indicate,
9 that it may exceed the long-term on an annualized
10 basis?
11 MR. SMITH: Objection, form.
12 A. Well, she's -- like I said, she's indicating
13 what we found in these other three studies, but, no,
14 the dispersion model wasn't actually run on this set
15 of data. So I think that's why she put "may" in
16 there. You don't know for sure until you run it.
17 Q. (BY MR. SIMS) So it's just speculation?
18 MR. SMITH: Objection, form.
19 A. I think that word has a connotation to it
20 and -- that indicates that it was based on something
21 that was unfounded, and I don't think that that was
22 the case here. I think she had good reason to put
23 that statement in there because of the three previous
24 studies that had been done.
25 Q. (BY MR. SIMS) She goes on to say, "AERMOD

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1 computer generated dispersion modeling cannot properly
2 represent the Additive Effect Or Synergistic Effect of
3 exposure to multiple chemical compounds
4 simultaneously."
5 Do you see that statement?
6 A. Yes.
7 Q. Is there any computer program out there
8 that -- that can do that, or that does do that?
9 A. No. We don't know synergistic effects in a
10 lot of cases. There have been studies that have
11 demonstrated that being exposed to multiple compounds
12 simultaneously is worse than the sum of the parts, so
13 to speak. Like if you're exposed to certain
14 concentration of benzene and a certain concentration
15 of toluene, you can get synergies -- well, I don't
16 know that there's a study that particularly looked at
17 benzene and toluene, but using those as just two
18 examples, that you can get health impacts that are
19 worse than the individual impacts of being exposed to
20 just the benzene at the level or just the toluene at
21 the level. I don't think there's a computer program
22 that could -- that could tell you synergistic impacts.
23 Q. You're not capable of telling what the
24 synergistic impacts of these things are, are you?
25 A. No.

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1 Q. Alisa Rich isn't capable of doing it either,
2 is she?
3 A. **She does have more background in toxicology
4 than I do.**
5 Q. How much more?
6 A. **I know she took a toxicology course at UTA.
7 I believe in her master's work she took some courses.**
8 Q. Does that make her an expert on toxicology?
9 A. **Depends on how you define expert. I was
10 just saying she knows more than I do about it.**
11 Q. Look down at -- lower down on that page,
12 says "8.0 Conclusion." Do you see that?
13 A. **Yes.**
14 Q. It says, "High levels of atmospheric VOCs,
15 known to have both carcinogenic, developmental
16 toxicant and neurotoxicant properties, were identified
17 through laboratory testing present on Client's
18 property."
19 Do you see that statement?
20 A. **Yes.**
21 Q. Now, when she talks about "high levels of
22 atmospheric VOCs," do you know what she's referring to
23 there?
24 A. **No.**
25 Q. You didn't see anything in her report that

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1 would support that statement, did you?
2 A. **We've already talked about the fact that she
3 had 24-hour averaging times, 24-hour concentrations
4 because of the variations in wind direction are lower
5 than a 1-hour. So if she had had individual 1-hour
6 readings over that 24-hour time period, most likely
7 there would have been 1-hour concentrations that
8 exceeded the short-term ESLs. But obviously that
9 specific data is not here.**
10 Q. And if -- if something exceeded a short-term
11 ESL, would that necessarily qualify it as a high
12 level?
13 A. **That depends on how you're defining high
14 level.**
15 Q. We don't know here, do we?
16 A. **No.**
17 Q. We know that the ESLs are 70 percent lower
18 than what we would expect to see for any health
19 effects, though; right?
20 MR. SMITH: Objection, form.
21 A. **According to the statements issued six
22 months ago by TCEQ. As we talked about, prior to
23 that, for years and years we did just compare directly
24 to ESLs.**
25 Q. (BY MR. SIMS) Look over at the chart that

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1 we've been looking at again. I think it's a couple of
2 pages over. Look at the first line there. Do you
3 see -- do you see "Benzene" up there?
4 A. **Yes.**
5 Q. And on the inside test, there's some levels
6 detected on the inside of the house?
7 A. **Yes.**
8 Q. And on the outside of the house, nothing was
9 detected.
10 A. **Yes.**
11 Q. Do you see that?
12 A. **Yes.**
13 Q. Based on that data, wouldn't it be --
14 wouldn't it be reasonable to think that the source of
15 benzene is somewhere in, around or near the house?
16 A. **I think it depends on how airtight the house
17 is.**
18 Q. Well, assume that the house has an attached
19 garage at which automobiles are parked and assume that
20 the house has an attached garage in which gasoline is
21 stored.
22 A. **It depends on the air changes per hour in
23 the house. The air changes per hour is a measure of
24 how often the volume of air within a structure is
25 changed over. I'd need to have some more specific**

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1 **information, because you've got a lot more dispersion
2 and dilution effects that go on in the ambient
3 atmosphere compared with an indoor situation,
4 particularly if you have a lower air exchange rate.
5 But I really just -- I don't know, without having some
6 more specific information.**
7 Q. So in terms of trying to articulate the
8 source of any of these compounds that were found on
9 the indoor air, you would need more information and
10 data to try to know or to try to determine what the
11 source of those compounds were; is that fair?
12 A. **Yes.**
13 Q. You didn't see anything in this report that
14 would allow you to determine the source of any of the
15 compounds shown on the inside air test?
16 A. **Well, like -- like I said, that's not really
17 my area of expertise. So I'd have to go back, you
18 know, read some textbooks, read some articles, try to
19 bone up on indoor air quality, before I would be in a
20 position to -- to intelligently talk about that.**
21 Q. Look over at --
22 A. **But like we -- like we stated, Rich Corsi,
23 that is his area of expertise, so he could -- he could
24 provide really good information there.**
25 Q. All right. Do you think Alisa Rich has

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1 performed enough tests or has enough information here
2 to determine that benzene -- that the benzene detected
3 in the air inside the house came from some source
4 outside the house?
5 **A. Probably not, but, again, I don't know --**
6 **you asked the question before about indoor air sources**
7 **of benzene, and I'm not up on those. If she has**
8 **gone -- if she has researched possible sources of**
9 **benzene indoors and has found that nothing that is**
10 **normally indoors releases benzene, then maybe she does**
11 **have a justification for that.**
12 Q. But as you sit here today, you don't know of
13 any justification for claiming that or asserting that
14 benzene found in the air inside the house came from
15 some source outside the house, based on the data
16 that's in this report?
17 MR. SMITH: Objection, form.
18 **A. Well, like I said, I don't know, because I**
19 **haven't researched indoor air sources of benzene, and**
20 **she went out to the house and would have been in a**
21 **better position to know if there were potentially**
22 **indoor sources of benzene.**
23 Q. (BY MR. SIMS) In order to try to determine
24 what the source of any particular compound is for the
25 air inside the house -- let me scratch that.

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1 If you're going to claim, for example,
2 that benzene emanated from a source outside the house,
3 it would be imperative to rule out any potential
4 source of benzene from inside the house; true?
5 MR. SMITH: Objection, form. Leading.
6 **A. Well, yeah, although you could have the**
7 **benzene coming from a combination of sources inside**
8 **and outside.**
9 Q. (BY MR. SIMS) But if you're going to claim
10 that it's solely coming from a source outside, you
11 need to rule out that there's no source either in or
12 around the house that it could be coming from?
13 MR. SMITH: Objection, form.
14 **A. Yes.**
15 Q. (BY MR. SIMS) And the same would be true
16 for any other compound found in the air inside the
17 house that she might claim would emanate from some
18 source outside the house, you would need to rule out
19 any other potential source of that compound in --
20 **A. Well, the con --**
21 Q. -- in or around the house?
22 **A. -- the concentrations inside are a function**
23 **of concentrations outside, any emission sources in the**
24 **house and the air exchange rate.**
25 Q. Do you know of any --

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1 **A. And so --**
2 Q. Do you know of any testing or methodology
3 used by Ms. Rich to, in fact, take into account all
4 those factors?
5 **A. I don't know whether she did or not.**
6 Q. In order to draw any conclusions, though,
7 about compounds inside the house, you would have to do
8 that kind of analysis in order to draw any sort of
9 reliable conclusions about the air quality inside the
10 house and where certain compounds may have come from.
11 **A. Well, I don't know what you mean by "that**
12 **kind of analysis," but you would at least have to have**
13 **looked at the literature and say, okay, they've got**
14 **carpet in the house, here is a study that shows that**
15 **carpet is not a significant source of benzene, so we**
16 **know we don't have the carpet being a source of**
17 **benzene. You would have to have some way to -- to get**
18 **at the emission sources within the house, the air**
19 **changes per hour and the -- the concentrations outside**
20 **the house, because the concentrations inside can be a**
21 **function of all those things.**
22 **The concentrations inside can also be a**
23 **function of removal mechanisms.**
24 Q. What does that mean?
25 **A. Well, in some cases you can have reactions**

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1 **that occur among compounds indoors. I know Rich Corsi**
2 **has documented some of that. You can also have**
3 **absorption of compounds onto surfaces so that they're**
4 **effectively removed from the air, and some of his work**
5 **has looked at that also.**
6 Q. In this report, the statement that we read
7 earlier, based on the data that's here, that's
8 attached, the statement that says, "High levels of
9 atmospheric VOCs, known to have both carcinogenic,
10 developmental toxicant and neurotoxicant properties,
11 were identified through laboratory testing present on
12 Client's property," that's a misleading statement,
13 based on the work that was done in this case, isn't
14 it?
15 MR. SMITH: Objection, form.
16 **A. I don't think it's misleading, because**
17 **depends on how you define high levels. I mean,**
18 **what else --**
19 Q. (BY MR. SIMS) How would you --
20 **A. -- what does --**
21 Q. -- how would you define it to make it not
22 misleading?
23 **A. What does that mean? I don't know that it's**
24 **misleading so much as that it just doesn't tell you a**
25 **whole lot.**

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1 Q. How would you define high levels so that it
2 would not be misleading?
3 A. Typically when I do these studies, I compare
4 levels to the Effects Screening Levels, and so then
5 you have a definite level to compare to; you're not
6 just saying "high."
7 Q. Well, Effects Screening Levels are certainly
8 not high levels, are they?
9 A. Well, comparatively, yeah. And, again, it
10 depends on how you're defining high. They're high
11 enough that there's a concern.
12 Q. Well, TCEQ said ESLs are safe levels; right?
13 MR. SMITH: Objection, form.
14 A. Well, as we've talked about, you can get a
15 concentration that's .001 micrograms per meter cubed
16 above that.
17 Q. (BY MR. SIMS) Does that make it unsafe?
18 A. Well, not if you believe the new guidance
19 that the ESLs had been set 70 percent lower than the
20 level at which health effects would occur.
21 Q. Well, the report is misleading in the sense
22 that it doesn't even mention the Air Monitoring
23 Comparison Values and then talk about the fact that
24 those are now the standards by which air quality
25 should be judged as opposed to these ESLs.

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1 MR. SMITH: Objection, form. Leading.
2 Q. (BY MR. SIMS) Isn't that true?
3 MR. SMITH: Objection, form. Leading.
4 Q. (BY MR. SIMS) Isn't it just intellectually
5 dishonest to put this stuff out there at a time when
6 the TCEQ has said these are the standards we're going
7 to use for air quality?
8 MR. SMITH: Objection, form. Leading.
9 A. Like I said before, I would really need to
10 talk to a toxicologist at TCEQ to find out more about
11 this decision to now issue ACMVs [sic], to have a
12 sense of the credibility of the values. And I don't
13 think it's -- you can characterize this as being
14 misleading when what you're asking her to have done
15 would be to have blindly just said that the AMCV
16 values are -- are good.
17 Q. (BY MR. SIMS) Well, I haven't asked her to
18 do anything. Okay?
19 As you sit here today, you don't know
20 whether the ESLs are good or the AMCVs are good, you
21 just don't know; is that right?
22 A. Right.
23 Q. And you're her teacher?
24 A. I'm not a toxicologist. As I've told you,
25 there are many areas of specialization within air

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1 quality. It's just like within medicine, you've got a
2 bunch of different specializations, and somebody that
3 focuses on neurology is not necessarily going to be an
4 expert in cardiology. That doesn't mean that I
5 couldn't find out. I could try to talk to some people
6 and form an opinion, but with everything else I have
7 to do at work, I haven't taken the time to do that.
8 Q. When you read through this port -- this
9 report, doesn't it give you the impression that, boy,
10 this is really bad, the air out here is just horrible?
11 A. I don't know. I don't read it that way. I
12 look at the numbers.
13 Q. When you look at the numbers, you realize
14 there's just really nothing here.
15 MR. SMITH: Objection, form.
16 Q. (BY MR. SIMS) Right?
17 A. I wouldn't make that blanket statement.
18 Q. There's nothing you can con -- you can
19 really conclude from the numbers, you've told me
20 before.
21 MR. SMITH: Objection, form. Leading.
22 A. Well, I think you have to include all the
23 caveats that we've talked about, that when you have a
24 24-hour value there's likely variations in
25 concentrations within that 24 hours, and if you don't

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1 have the specific hourly data, you can't conclude for
2 certain that there was an exceedance of a 1-hour
3 value.
4 Q. (BY MR. SIMS) And if you do try to conclude
5 that, you sure don't know how far it exceeded, if it
6 did at all; true?
7 MR. SMITH: Objection, form. Leading.
8 A. Well, you have information on what the
9 concentration was at the location that you collected
10 the sample. And that's actually part of what
11 dispersion modeling enables you to do. In addition to
12 looking at how concentrations vary over different
13 meteorological conditions, dispersion modeling allows
14 you to estimate how concentrations vary spatially, so
15 it gives you more of that information.
16 Q. (BY MR. SIMS) Did you bring a copy of the
17 draft of Alisa Rich's dissertation to the deposition
18 today?
19 A. No.
20 Q. Why not?
21 A. Let's see. I don't have -- okay.
22 MR. SIMS: Let's mark that as No. 13, I
23 guess.
24 Q. (BY MR. SIMS) Is that -- are you looking at
25 the deposition notice?

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1 A. Yeah. Well, it wasn't something that,
2 looking at this list of documents, struck me as being
3 something I should bring.
4 Q. Well, you were asked to bring draft --
5 drafts of all of her academic papers.
6 A. Oh, yeah, I read that. I had her in class,
7 like, in 2003 and 2004 and 2005. I hand papers back
8 to the students. So I don't have all those papers
9 anymore.
10 (EXHIBIT(S) NO. 13 MARKED.)
11 Q. (BY MR. SIMS) Okay. But you do have a
12 draft of her dissertation?
13 A. Yes.
14 Q. And you understand that from Deposition
15 Exhibit 13 you were subpoenaed to bring that here
16 today?
17 A. Actually, that didn't cross my mind. When I
18 read "academic papers," I was thinking of -- I had
19 just looked at the list of courses that she took from
20 me and when she took them, and I was thinking about,
21 "I don't have any of that stuff."
22 Q. Will you comply with the subpoena and
23 produce a draft of her dissertation?
24 MR. SMITH: Objection, form.
25 A. Yes.

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1 Q. (BY MR. SIMS) Yes, you will?
2 A. Yes.
3 Q. And when can you produce that to us by?
4 A. Tomorrow.
5 Q. Okay. Do you need to -- can you e-mail that
6 to me or how will you get that to us?
7 A. In a way, it doesn't seem fair to -- for me
8 to have to supply that. When you're doing academic
9 writing, you do -- go through multiple versions of
10 things, and you don't intend for everybody to read the
11 product until it's the final product. I -- the
12 dissertations, once they are published, are available
13 to everybody. From UTA, they -- they go out through a
14 Internet service, and anybody can get on there and
15 access them.
16 Q. When will this be published?
17 A. When she finishes it.
18 Q. When will that be?
19 A. I -- I wouldn't want to give drafts of
20 theses or dissertations of any of my students out for
21 people to read before they're done.
22 Q. When -- when will she finish, or do you have
23 a timetable on that?
24 A. Most optimistic would be May.
25 Q. Of 2011?

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1 A. (Moving head up and down.)
2 Q. Is that yes?
3 A. Yes.
4 Q. And you understand that -- that what she's
5 writing her dissertation on are the very kinds of
6 things that she wants to come into court and testify
7 about in this case; right?
8 A. Well, it's not exactly the -- in general
9 it's the same, but I -- the data in this particular
10 case is in the report here.
11 Q. You understand that if there are things in
12 that dissertation that she's written that undermine or
13 show that this work lacks credibility in any respect,
14 that the party that is being sued here ought to have
15 the right to access that information, to defend
16 themselves in a court of law. Do you understand that?
17 MR. SMITH: Objection, form.
18 A. I would think, if anything, the dissertation
19 is going to make what's in here more credible.
20 Q. (BY MR. SIMS) Well, and -- and the parties
21 ought to have a right to access that information to
22 determine that for themselves.
23 MR. SMITH: Objection, form.
24 A. Once the dissertation is completed, yes.
25 Q. (BY MR. SIMS) Are you going to refuse to

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1 comply with the subpoena?
2 A. Well, I'm just saying I don't think it's a
3 very reasonable request. I'll do it if I absolutely
4 have to, but ...
5 MR. SMITH: And I don't know if the
6 order that we had applies to her. I just don't
7 remember.
8 MR. SIMS: It does.
9 MR. SMITH: Okay. I don't know if
10 she's had her 20 days.
11 MR. SIMS: Applies to all of them,
12 doesn't it?
13 MR. OKRUHLIK: She had until the time
14 of the deposition.
15 MR. SMITH: Well, the order gave them
16 20 days.
17 MR. OKRUHLIK: Gave her until the time
18 of the deposition.
19 MR. SMITH: Oh, it did? I didn't think
20 that was our agreement.
21 Q. (BY MR. SIMS) Well, I guess, if you decide
22 not to produce it, I suppose we'll take it up with the
23 judge and see if he orders you to produce it. I mean,
24 I can't -- I can't make you do anything, so ...
25 (EXHIBIT(S) NO. 14 MARKED.)

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1 Q. (BY MR. SIMS) Let me show you what I've
2 marked as Exhibit 14, Ms. Rich. Excuse me,
3 Dr. Sattler. This is a transcript from Ms. Rich.
4 Have you ever seen this before?
5 A. No.
6 Q. If you will, flip over to the third page of
7 this document, and do you see in the middle of the
8 page where it talks about Board Member Rich?
9 A. Yes.
10 Q. It says, "My name is Alisa Rich."
11 A. Yes.
12 Q. And it records -- the certified court
13 reporter that took this down records down, and look
14 down below that, where Ms. Rich says, "I have a Ph.D.
15 in air pollution control design."
16 Do you see that statement?
17 A. Yes.
18 Q. And if you look back at the first page of
19 this, you see that this was recorded on March 12th of
20 2008?
21 A. Yes.
22 Q. Alisa Rich did not have a Ph.D. in air
23 pollution control design in March of 2008, did she?
24 A. No.
25 Q. She doesn't have a Ph.D. in air pollution

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1 control design today, does she?
2 A. No. **She's a doctoral candidate.**
3 Q. She goes on to say, "If that does not
4 satisfy you, I don't know what possibly could."
5 Do you see that?
6 A. Yes.
7 Q. That's not a mistake or a misstatement, is
8 it?
9 MR. SMITH: Objection, form.
10 A. **I don't know.**
11 Q. (BY MR. SIMS) I mean, she's intentionally
12 misleading whoever she's communicating to there, isn't
13 she?
14 MR. SMITH: Objection, form.
15 A. **I don't know.**
16 Q. (BY MR. SIMS) Does it give you concern
17 about her intellectual honesty?
18 A. **Gives me a concern, yes.**
19 Q. She goes on to say, "I'm a specialist in the
20 oil and gas."
21 Do you see that statement?
22 A. Yes.
23 Q. Then she goes on to say, "I am not only a
24 specialist, I am a consultant to oil and gas to
25 provide the most possibly environmentally sensitive,

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1 environmentally supportive industry technology that
2 gives the rights to the land owner but at the same
3 time protects human ... environments as well as animal
4 environments."
5 Do you see that statement?
6 A. Yes.
7 Q. Do you know of one single oil and gas
8 company that she's ever consulted with?
9 A. **No, but I haven't tried to find that out.**
10 Q. Well, she testified that she's never
11 consulted with any oil and gas company under sworn
12 oath. You wouldn't have any reason to disbelieve
13 that, would you?
14 MR. SMITH: Objection, form.
15 A. **No. But she's not saying companies here.**
16 **She's saying "consultant to oil and gas."**
17 Q. (BY MR. SIMS) Well, if you heard that,
18 would -- would you think that she was a consultant to
19 some oil and gas company somewhere?
20 MR. SMITH: Objection, form.
21 A. **I think I would ask her what she meant by**
22 **that, because there's actually not a object of the**
23 **phrase.**
24 Q. (BY MR. SIMS) It's misleading, isn't it?
25 MR. SMITH: Objection, form.

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1 A. **Well, there's -- there's something missing.**
2 Q. (BY MR. SIMS) If you're --
3 A. **Again, "misleading" has a connotation to it.**
4 Q. If you're an advocate for the environment,
5 is it okay to not tell the truth?
6 A. No.
7 Q. If you're an advocate for the environment,
8 is it okay to put reports together that don't identify
9 or articulate the entire truth of what it is you're
10 looking at?
11 MR. SMITH: Objection, form.
12 A. **I don't think you ever could put a report**
13 **together that articulated entire truth.**
14 Q. (BY MR. SIMS) Well, at least as best you
15 know it.
16 MR. SMITH: Objection, form.
17 A. **I don't have any indication to believe that**
18 **she wasn't telling the truth as she knew it.**
19 Q. (BY MR. SIMS) Well, you know that she
20 didn't -- certainly didn't talk about other standards
21 to compare to that were much higher than these ESLs,
22 she didn't talk about that, she didn't talk about all
23 the uncertainty that exists in these tentatively
24 identified compounds and that sort of thing, that's
25 not in there, is it?

1 MR. SMITH: Objection, form.
 2 A. **It's not in there, but I don't think that**
 3 **that means she was intentionally trying to be**
 4 **misleading.**
 5 Q. (BY MR. SIMS) It's intellectually
 6 dishonest, though, isn't it?
 7 MR. SMITH: Objection, form. Asked and
 8 answered.
 9 A. **Not necessarily. You can't ever talk about**
 10 **every issue that might be related to something.**
 11 Q. (BY MR. SIMS) Why -- why do you feel the
 12 need to defend this lady?
 13 MR. SMITH: Objection, form.
 14 Argumentative.
 15 A. **I'm not trying to defend her. I'm trying to**
 16 **answer your questions, but it seems like in some cases**
 17 **you're trying to lead me to say something that I don't**
 18 **really think is fair, like use a term that has a**
 19 **connotation to it that I don't want to imply.**
 20 Q. (BY MR. SIMS) Okay. Look on down in the --
 21 in the transcript there. She goes on to say, "I have
 22 a doctorate in air pollution."
 23 Do you see that?
 24 A. **Yes.**
 25 Q. Do you think that's misleading?

1 A. **Yes.**
 2 Q. Do you think that's dishonest?
 3 A. **Well, yes. She should have said, "I am**
 4 **studying for a doctorate in air pollution."**
 5 Q. Do you think it's intellectually dishonest,
 6 what she said in March of 2008?
 7 MR. SMITH: Objection, form.
 8 A. **Yes.**
 9 Q. (BY MR. SIMS) Have you seen other
 10 environmental companies' work in response to her --
 11 Alisa Rich's work on Dish and some of these other
 12 reports that you've participated in?
 13 A. **Have I seen other companies' work in**
 14 **response?**
 15 Q. Yes, ma'am.
 16 A. **No.**
 17 Q. Would it surprise you to know that that work
 18 has been heavily criticized?
 19 A. **What, my work, or the -- the work in**
 20 **response?**
 21 Q. No. Your work and Alisa Rich's work.
 22 A. **I think my work stands up to anybody that**
 23 **has expertise in dispersion modeling. If somebody was**
 24 **criticizing it, they probably didn't have -- well, it**
 25 **wouldn't surprise me to see somebody without a**

1 **scientific background criticize it, because they**
 2 **probably wouldn't understand it.**
 3 Q. You just haven't seen any of those reports?
 4 A. **No.**
 5 **(EXHIBIT(S) NO. 15 MARKED.)**
 6 Q. (BY MR. SIMS) Let me show you what I've
 7 marked as Exhibit 15 to your deposition.
 8 MR. SIMS: I've got an extra copy for
 9 you.
 10 MR. SMITH: Okay, thank you.
 11 Q. (BY MR. SIMS) Have you ever seen that
 12 document before?
 13 A. **I've looked at the Handbook of Operating**
 14 **Procedures, as I -- as I stated earlier, for**
 15 **different -- I haven't read the whole thing. I've**
 16 **looked for specific policies. Like, I've looked --**
 17 **looked at the leave policy.**
 18 Q. Let's look at policy Section 6-1403 that's
 19 got big bold letters, "Compensation From Students."
 20 Do you see that?
 21 A. **Uh-huh.**
 22 Q. Is that yes?
 23 A. **Yes.**
 24 Q. What does No. 1 say there?
 25 A. **"Members of this faculty or staff, without**

1 **previous and special approval from The Board of**
 2 **Regents, shall not collect from students any fees or**
 3 **charges and shall not sell to students books, notes,**
 4 **or similar student supplies."**
 5 Q. I think you've testified here today that you
 6 have collected from Alisa Rich's company payment for
 7 consulting fees; correct?
 8 MR. SMITH: Objection, form.
 9 A. **Yeah. I hadn't seen this, and I'd be happy**
 10 **to give the money back. Like I said, I did that work**
 11 **at a loss anyway.**
 12 Q. (BY MR. SIMS) And you haven't -- you
 13 didn't -- you didn't consult with or get special
 14 approval from the Board of Regents before you did
 15 that, did you?
 16 MR. SMITH: Objection, form.
 17 A. **No, I didn't know that this was here. I**
 18 **would be happy to give the money back.**
 19 **(EXHIBIT(S) NO. 16 MARKED.)**
 20 Q. (BY MR. SIMS) Let's look at Exhibit 16 to
 21 your deposition. Have you ever seen this policy?
 22 A. **Yes.**
 23 Q. Do you see that paragraph 1. under Section
 24 6-0012 says that, "Outside employment is any activity
 25 for which a faculty receives a remuneration of any

1 kind for services rendered other than that directly
2 associated with his/her employment at the university,"
3 falls under the scope of this?

4 **A. Yeah, but this is related to my employment
5 at the university. The first project that I did for
6 her actually went through our Office of Grants and
7 Contracts. I -- I teach a course in dispersion
8 modeling, you know. I do dispersion modeling. We
9 regularly -- part of what we're required to do is get
10 funding from outside sources.**

11 Q. Look at No. 4 there. Do you see that, says,
12 "Regents' Rules and Regulations specifically require
13 that a full-time faculty member request approval from
14 the President or his/her delegate to engage in
15 consulting or other outside employment activities."

16 Did I read that correctly?

17 **A. Yeah.**

18 Q. Is there anything misleading about that or
19 confusing?

20 **A. Well, I'd say it was confusing, but, like I
21 said, the first dispersion modeling setting went
22 through our Office of Grants and Contracts. So it
23 wasn't consulting. It was a contract.**

24 Q. It was a contract that you had with Wolf
25 Eagle?

1 **longer accuse me of any impropriety. As I've stated,
2 I did the work at a loss anyway.**

3 Q. (BY MR. SIMS) Ma'am, I'm -- I haven't
4 accused you of anything. I'm simply asking questions.
5 Would you like to take a break, take a -- get a -- get
6 a Kleenex or take a break?

7 **A. I will give you a check for the entire
8 amount of money --**

9 Q. You don't owe me any money.

10 **A. -- before I leave here.**

11 Q. You don't owe me any money, ma'am. The
12 money didn't come from me. I'm simply asking
13 questions. You understand my client has been sued.
14 And Alisa Rich is a so-called expert in this case,
15 making all kinds of allegations, and my clients have a
16 right to get to the bottom of what she's up to. Do
17 you understand that?

18 MR. SMITH: Objection, form.

19 Q. (BY MR. SIMS) Do you understand that?

20 **A. You're implying that she was providing me
21 this money to somehow curry favor with me, and that's
22 not the case. As I've told you, I actually did the
23 work at a loss in terms of my time. And I will give
24 the money back so you cannot claim that.**

25 Q. I'm not -- I haven't implied anything. I've

1 **A. Yes.**

2 Q. For consulting services?

3 **A. Yes.**

4 Q. And according to this policy, "Approval must
5 be obtained in advance, must be obtained for each type
6 of activity separately, and is valid for a period not
7 to exceed beyond the end of the fiscal year during
8 which the request is made."

9 Do you see that?

10 **A. Yeah, but, like I said, we go through Grants
11 and Contracts all the time.**

12 Q. Do you consult with your students all the
13 time?

14 **A. The Department Chair is aware of it, and ...**

15 Q. Do you consult with your students all the
16 time, for payment?

17 **A. No. The opportunity hasn't come up in any
18 other case.**

19 Q. Do you think that it clearly gives at least
20 an appearance of impropriety for a student to be
21 paying a professor, especially one on -- whom is
22 working on the doctoral dissertation?

23 MR. SMITH: Objection, form.

24 **A. Yes, it would give an appearance. And I
25 will return the money as of today, so you can no**

1 asked you --

2 **A. Yes, you have.**

3 Q. I've asked you about the facts.

4 **A. You've implied, definitely implied
5 interpretations in the questions that you've asked.**

6 Q. I think more -- more realistically, I think
7 you've implied your own answers to the questions I've
8 asked you.

9 MR. SMITH: Object to side-bar.

10 Q. (BY MR. SIMS) But I haven't -- I haven't
11 implied anything in my questions. I think the record
12 will reflect that.

13 MR. SMITH: I'll object to the
14 side-bar. And I disagree with that.

15 Q. (BY MR. SIMS) Do you --

16 MR. SMITH: I think you have implied.

17 Q. (BY MR. SIMS) Do you -- do you intend to do
18 any more consulting work with Alisa Rich?

19 **A. Not after today, no, sir.**

20 Q. It's not good for the university for its
21 professors to associate with people who have
22 intentionally misrepresented their credentials, is it?

23 MR. SMITH: Objection, form.

24 **A. No.**

25 Q. (BY MR. SIMS) It's not good for professors

1 who have earned a Ph.D. to associate themselves with
2 people who pass themselves off as a Ph.D. when in fact
3 they haven't earned one, is it?

4 A. No.

5 Q. Do you feel like you've been misled by Alisa
6 Rich?

7 MR. SMITH: Objection, form.

8 Q. (BY MR. SIMS) By her not disclosing to you
9 all of her prior statements?

10 MR. SMITH: Objection, form.

11 A. Well, if the document here is actually
12 credible.

13 Q. (BY MR. SIMS) If the document is actually
14 credible, you feel like Alisa Rich has misled you?

15 MR. SMITH: Objection, form.

16 A. Well, she didn't mislead me, but she
17 misled -- or she did not state her qualifications
18 correctly to the audience of the document.

19 Q. (BY MR. SIMS) And that's a serious concern
20 to you, isn't it?

21 MR. SMITH: Objection, form.

22 A. I feel like you're trying to lead me to say
23 something that I wouldn't ordinarily say.

24 MR. SMITH: Objection, form. Leading.

25 Q. (BY MR. SIMS) Well, is it a serious concern

1 Q. Are you against oil and gas drilling?

2 A. No.

3 Q. Have you ever written anyone asking for a
4 moratorium on oil and gas drilling?

5 A. Yes, but that's not the same thing as being
6 against it.

7 Q. Are you against oil and gas drilling in
8 certain areas?

9 A. Not necessarily. What I asked for is
10 moratorium on drilling until we get the results of the
11 Fort Worth study, they're supposed to be out in March,
12 that are going to provide extensive set of data on all
13 kinds of drilling sites. The information that I have
14 here is on compressor stations. That study is
15 supposed to look at sites that have wells and
16 condensate tanks and a variety of kinds of tanks.
17 I've -- supposed to actually include dispersion
18 modeling.

19 And what I've -- I've said is that I
20 think that at this point we need more data and that
21 based on these studies that I've done that there is a
22 concern, and that after the results of the Fort Worth
23 study we'll have enough data to really know what
24 health impacts may be, and as a result of the Fort
25 Worth study, they're supposed to recommend setback

1 or not? That's all I'm asking.

2 A. It's a concern, yes.

3 Q. Have you ever seen any of Alisa Rich's
4 YouTube videos?

5 A. No.

6 Q. Have you ever talked to her about her
7 YouTube videos?

8 A. No.

9 Q. Were you aware that there were YouTube
10 videos out there of her?

11 A. No.

12 Q. Do you think that Alisa Rich is -- is
13 unbiased, based on your dealing with her and your
14 communications with her?

15 A. I don't know.

16 Q. Do you think that she's an advocate against
17 oil and gas drilling?

18 A. I think she -- she does the studies and --
19 and publishes the results, or not publishes, but puts
20 the results out there.

21 Q. Based on your communications and
22 conversations with her, has she indicated to you that
23 she is against oil and gas drilling?

24 A. No. In fact, she's told me that she's for
25 it.

1 distances if they are needed. I'm not against the
2 drilling at all. I just think with this study
3 imminently going to provide results of lots of data,
4 that it's prudent to -- to get the results of that
5 study, so that if it recommends a setback distance of
6 400 feet, say, from a well, we could try to locate the
7 well 400 feet from whatever it is.

8 Q. When -- when you talk about a compressor
9 station, how many compressors have to be on-site for
10 it to be a compressor station?

11 A. Oh, I don't know. It depends on how you
12 want to define station. I ...

13 Q. I'm asking you. I mean, you've done --
14 you've done your three reports.

15 A. Oh.

16 Q. Does it make a difference?

17 A. Well, I was using the word to describe a
18 site where there are compressors. In one case there
19 were nine compressors, in another case there were
20 stations owned by five different entities, and then in
21 the third case there were -- I don't think I actually
22 have it listed in here, the number of engines.

23 Q. Is any -- is any of your work applicable to
24 a situation where there's just one compressor
25 servicing the well or wells at that site, not a

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1 compressor station that's got multiple compressors on
2 it?

3 **A. You could use a similar methodology.**

4 Q. Do you -- do you know what the results would
5 be, if you haven't done that?

6 **A. No.**

7 Q. Do you understand that the -- the Wolf Eagle
8 report in this case doesn't deal with a compressor
9 station that has nine or 10 compressors or anything
10 like that, it's simply one drill site with one
11 compressor that services those wells?

12 MR. SMITH: Objection, form.

13 Q. (BY MR. SIMS) Did you understand that?

14 MR. SMITH: Objection, form. Leading.

15 **A. I didn't remember that from looking over
16 this quickly, but, okay.**

17 Q. (BY MR. SIMS) So there's nothing -- there's
18 nothing in the work that you've done before that
19 would -- that would allow Alisa Rich to opine or
20 speculate about whether, if you ran an AERMOD study in
21 this particular case, if it would be similar to or
22 look like anything you've done in these other cases
23 where you've got these big nine, 10, 12-compressor
24 stations?

25 **A. You could make a back-of-the-envelope**

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1 **guesstimate.**

2 Q. That's just kind of another way of saying
3 speculation.

4 MR. SMITH: Objection, form.

5 Q. (BY MR. SIMS) Right?

6 **A. We've talked about the fact that I think
7 "speculation" has a negative connotation to the work.
8 I think you could make an educated estimate.
9 But the concentrations that come out of
10 the dispersion model are directly proportional to the
11 emission rate, so if you assume that the compressor
12 engines had similar emission rates, which they may or
13 may not, and you had 10 engines on-site versus one
14 engine on-site, like I said, you could do just a rough
15 guesstimate that the emissions would be one-tenth in a
16 situation where you had the one compressor engine,
17 but -- but that's -- you know, that's a guesstimate.
18 It's not a really accurate way of --**

19 Q. Certainly not something you would want to go
20 into court and stand up on and say, "I swear this
21 is" -- "this is true what I'm telling you here."

22 MR. SMITH: Objection, form.

23 Q. (BY MR. SIMS) Is it?

24 **A. No.**

25 MR. SMITH: Objection, form.

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1 Q. (BY MR. SIMS) It's certainly not
2 scientific, is it?

3 MR. SMITH: Objection, form.

4 **A. Well, it is what it is. It's a guesstimate.**

5 MR. SIMS: Okay. Pass the witness.

6 EXAMINATION

7 BY MR. SMITH:

8 Q. Okay. Could you state your name for the
9 court and jury.

10 THE WITNESS: Maybe I'll take a break.

11 MR. SMITH: Okay. You need to take the
12 microphone off.

13 THE VIDEOGRAPHER: Going off the record
14 at 2:38.

15 (Recess from 2:38 p.m. to 2:39 p.m.)

16 MR. SMITH: Counsel has agreed that --
17 it's my understanding that Mr. Sims has a doctor's
18 appointment that he has to go to. We talked about
19 that yesterday. We agreed that we would -- if we
20 weren't finished with the deposition by that time we
21 would recess, and we are going to agree to recess the
22 deposition until a mutually agreeable time to
23 reconvene it.

24 Is that agreeable?

25 MR. SIMS: Yeah, that's fine.

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1 MR. SMITH: All right.
2 (Deposition adjourned at 2:39 p.m.)
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1 CHANGES AND SIGNATURE
 2 TO THE ORAL DEPOSITION OF
 3 MELANIE L. SATTLER
 4 Volume 1 of 1
 5 December 14, 2010
 6 PAGE LINE CHANGE REASON
 7 _____
 8 _____
 9 _____
 10 _____
 11 _____
 12 _____
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 14 _____
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1 CAUSE NO. 236-236781-09
 2 SCOTT LAW and REBECCA § IN THE DISTRICT COURT
 3 LAW, §
 4 §
 5 Plaintiffs §
 6 v. § TARRANT COUNTY, TEXAS
 7 §
 8 RANGE RESOURCES §
 9 CORPORATION AND RANGE §
 10 TEXAS PRODUCTION, LLC, §
 11 §
 12 Defendants § 236TH JUDICIAL DISTRICT
 13 -----

14 REPORTER'S CERTIFICATION
 15 DEPOSITION OF
 16 MELANIE L. SATTLER
 17 Volume 1 of 1
 18 December 14, 2010
 19 -----
 20 I, Gloria Carlin, Certified Shorthand Reporter in
 21 and for the State of Texas, hereby certify to the
 22 following:
 23 That the witness, MELANIE L. SATTLER, was duly
 24 sworn by the officer and that the transcript of the
 25 oral deposition is a true record of the testimony
 given by the witness;
 That the deposition transcript was submitted on
 December 27, 2010 to the witness or to the attorney
 for the witness for examination, signature and return
 to Gloria Carlin by 20 days after receipt of final
 volume, which has not been scheduled at this time;
 That the amount of time used by each party at the

1 I, MELANIE L. SATTLER, have read the foregoing
 2 deposition and hereby affix my signature that same is
 3 true and correct, except as noted above.
 4
 5 _____
 6 MELANIE L. SATTLER
 7
 8 STATE OF _____)
 9 COUNTY OF _____)
 10 Before me, _____, on this
 11 day personally appeared MELANIE L. SATTLER, known to
 12 me (or proved to me under oath or through
 13 _____ (description of identity card or other
 14 document) to be the person whose name is subscribed to
 15 the foregoing instrument and acknowledged to me that
 16 they executed the same for the purposes and
 17 consideration therein expressed.
 18 (Seal) Given under my hand and seal of office
 19 this _____ day of _____, _____.
 20
 21 _____
 22 Notary Public in and for the
 23 State of _____
 24
 25

1 deposition is as follows:
 2 Jason C.N. Smith - (00:00)
 3 Andrew D. Sims - (04:41);
 4
 5 That pursuant to information given to the
 6 deposition officer at the time said testimony was
 7 taken, the following includes counsel for all parties
 8 of record:
 9 FOR THE PLAINTIFFS:
 10 Jason C.N. Smith, Esq.
 11 LAW OFFICES OF ART BRENDER
 12 600 Eighth Avenue
 13 Fort Worth, Texas 76104
 14 817.334.0171
 15 jasons@artbrender.com
 16
 17 FOR THE DEFENDANTS:
 18 Andrew D. Sims, Esq.
 19 Troy D. Okruhlik, Esq.
 20 HARRIS, FINLEY & BOGLE, P.C.
 21 777 Main Street, Suite 3600
 22 Fort Worth, Texas 76102-5341
 23 817.870.8700
 24 asims@hfblaw.com
 25 tokruhlik@hfblaw.com
 I further certify that I am neither counsel for,
 related to, nor employed by any of the parties or
 attorneys in the action in which this proceeding was
 taken, and further that I am not financially or
 otherwise interested in the outcome of the action.
 Further certification requirements pursuant to
 Rule 203 of TRCP will be certified to after they have

1 occurred.
2 Certified to by me on December 27, 2010.

3
4
5
6 Gloria Carlin
Gloria Carlin, CSR No. 498
Expiration Date: 12/31/12
Merit Court Reporters
7 Firm Registration No. 133
307 W. 7th Street, Suite 1350
8 Fort Worth, Texas 76102
Job No. 9470 (817) 336-3042 (800) 336-4000



9
10 FURTHER CERTIFICATION UNDER RULE 203 TRCP

11 -----
12 The original deposition was/was not returned to
13 the deposition officer on -----;
14 If returned, the attached Changes and Signature
15 page contains any changes and the reasons therefor;
16 If returned, the original deposition was
17 delivered to Andrew D. Sims, Custodial Attorney;
18 That § _____ is the deposition officer's
19 charges to the DEFENDANTS for preparing the original
20 deposition transcript and any copies of exhibits;
21 That the deposition was delivered in accordance
22 with Rule 203.3, and that a copy of this certificate
23 was served on all parties shown herein and filed with
24 the Clerk.
25 Certified to by me this ____ day of _____,

1 2010.

2
3 By: _____
4 For: Gloria Carlin, CSR No. 498
Expiration Date: 12/31/12
Merit Court Reporters
5 Firm Registration No. 133
307 W. 7th Street, Suite 1350
6 Fort Worth, Texas 76102
Job No. 9470 (817) 336-3042 (800)336-4000