

OFFICE OF ZONING AND ADMINISTRATIVE HEARINGS  
FOR MONTGOMERY COUNTY

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:  
PETITION OF COSTCO WHOLESALE : Case No. S-2863  
CORPORATION : OZAH No. 13-12  
:  
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A hearing in the above-entitled matter was held on  
May 8, 2014, commencing at 9:41 a.m., at the Office of  
Zoning and Administrative Hearings, 100 Maryland Avenue, 2nd  
Floor Council Hearing Room, Rockville, Maryland 20850  
before:

Martin L. Grossman  
Hearing Examiner

A P P E A R A N C E S

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C O N T E N T S

Rebuttal				
Witnesses:	Direct	Cross	Redirect	Recross
David Sullivan				
By Ms. Cordry		18		
By Ms. Rosenfeld		203		

E X H I B I T S

Exhibit No.		Marked/Received
563	Applicant's revised list of objections to exhibits	88
564(a)	PM2.5 Air Monitor Readings	91
564(b)	NO2 Values-Yearly and Running Averages, Micrograms Per Cubic Meter	92
564(c)	NO2 Values from Nearby Monitors, 2009 to 2013	94
564(d)	CO Monitor Values	94
564(e)	Daily Mean PM2.5 Concentration	95
565(a)	Twenty-four-hour EPA monitor readings for PM2.5	148
565(b)	One-hour and eight-hour EPA monitor readings for CO	148
565(c)	One-hour EPA monitor readings for NO2	149
565(d)	One-hour EPA monitor readings for NO2 in Virginia	150

P R O C E E D I N G S

1 MR. GROSSMAN: This is the 32nd day of a public  
2 hearing in the matter of Costco Wholesale Corporation, Board  
3 of Appeals No. S-2863, OZAH No. 13-12, a petition for a  
4 special exception pursuant to Zoning Ordinance Section  
5 59-G-2.06 to allow petitioner to construct and operate an  
6 automobile filling station which would include 16 pumps.  
7 The subject site is located at 11160 Veirs Mill Road in  
8 Silver Spring, Maryland. That's Lot N, 631 Wheaton Plaza,  
9 Parcel 10, also known as Westfield Wheaton Mall, and is  
10 zoned C-2.

11 The hearing was begun on April 26, 2013, and the  
12 next session will be on May 12, 2014, here in the second  
13 floor hearing room of the COB at 9:30 a.m. This hearing is  
14 conducted on behalf of the Board of Appeals. My name is  
15 Martin Grossman. I'm the Hearing Examiner, which means I  
16 will take evidence and write a report and recommendation to  
17 the Board of Appeals which will make the decision in this  
18 case. Will the parties identify themselves, please?

19 MR. BRANN: Good morning. Erich Brann for Costco.  
20 MR. GROSSMAN: Mr. Brann.  
21 MS. HARRIS: Good morning. Pat Harris for Costco.  
22 MR. GROSSMAN: Ms. Harris.  
23 MR. GOECKE: Mike Goecke for Costco.  
24 MR. GROSSMAN: Mr. Goecke.  
25

1 MS. CORDRY: Karen Cordry for Kensington Heights.  
2 MR. GROSSMAN: Ms. Cordry.  
3 MR. COLE: Dr. Cole.  
4 MR. GROSSMAN: Dr. Cole.  
5 MR. SILVERMAN: Larry Silverman, Stop Costco Gas  
6 Coalition, good morning, sir.  
7 MS. ADELMAN: Abigail Adelman, Stop Costco Gas  
8 Coalition, good morning.  
9 MR. GROSSMAN: Good morning.  
10 MS. SAVAGE: Donna Savage, Kensington Heights.  
11 MR. GROSSMAN: All right.  
12 MS. SHEARD: Virginia Sheard, Kensington View.  
13 MR. GROSSMAN: Ms. Sheard.  
14 MR. HLINKA: Dennis Hlinka with Sullivan  
15 Environmental.  
16 MR. GROSSMAN: I'm sorry. With?  
17 MR. HLINKA: Sullivan Environmental.  
18 MR. GROSSMAN: Okay.  
19 MR. HLINKA: Sorry.  
20 MR. GROSSMAN: Okay. All right. Let's turn to a  
21 couple of preliminary matters. Since our session on May 1,  
22 Exhibits 556 to 562 were filed. 556 was the redline markup  
23 of Mr. Sullivan's rebuttal report sent by Mr. Goecke. That  
24 is a comparison of the final version, which is what had been  
25 filed, versus the draft before that, which is what had been

Page 6

1 inadvertently distributed to the opposition; 557, e-mails  
2 between Mr. Goecke and Ms. Rosenfeld regarding new documents  
3 that may be used by Dr. Cole in his rebuttal testimony and  
4 Costco's objection to the documents; 558, e-mails between  
5 the parties on May 6, 2014, regarding testimony scheduled  
6 for the May 8 hearing; 559, e-mail from Ms. Cordry,  
7 submitting a report to be used during the cross-examination  
8 of Mr. Sullivan, and then 559(a) is a U.S. report on climate  
9 change: Adverse Effects from the Creation of Unnecessary  
10 Greenhouse Gases. 560 is an e-mail from Ms. Kamen, May 1,  
11 2014, supplementing the planning staff's April 10, 2014,  
12 response regarding Intersection 16. 561 and 562 were  
13 e-mails from Ms. Cordry, one with regard to a meeting packet  
14 and pedestrian crash data and the other with documents to be  
15 used at the hearing.

16 The witnesses scheduled for today is  
17 Mr. Sullivan's cross and potentially rebuttal from the, from  
18 the opposition.

19 All right. Mr. Goecke, have you had an  
20 opportunity to winnow down your objection list?

21 MR. GOECKE: I have.

22 MR. GROSSMAN: Okay.

23 MR. GOECKE: And --

24 MR. GROSSMAN: I mean, I'm not asking you to waive  
25 any objections. It's just your own judgment on what you

Page 7

1 want to submit as your objection.

2 MR. GOECKE: I have.

3 MR. GROSSMAN: Okay.

4 MR. GOECKE: Based on our discussion before, I  
5 focused on the exhibits that are news articles or  
6 non-peer-reviewed articles submitted by various universities  
7 and other institutions --

8 MR. GROSSMAN: Okay.

9 MR. GOECKE: -- and I have prepared a revised  
10 list, which I can, I can pass out at the, after the next  
11 break.

12 MR. GROSSMAN: Okay. All right. Any other  
13 preliminary or procedural matters?

14 MS. CORDRY: No. I mean, I assume we will have a  
15 further period of time now to review the revised list and  
16 respond to that again?

17 MR. GROSSMAN: Certainly.

18 MS. CORDRY: Okay.

19 MR. GROSSMAN: I'll give you a couple of minutes.

20 MS. CORDRY: No. I mean --

21 MR. GROSSMAN: Yes, you'll have what time you  
22 need --

23 MS. CORDRY: Okay. Thank you.

24 MR. GROSSMAN: -- reasonably; reasonably, what  
25 time you need.

Page 8

1 MS. CORDRY: Yes.

2 MR. GOECKE: And if I could, Mr. Grossman, I just  
3 would like to comment on a few of the documents that have  
4 been submitted since our last hearing.

5 MR. GROSSMAN: Yes.

6 MR. GOECKE: You know, again, I'll note that we're  
7 receiving these documents less than the 10-day rule. I know  
8 that you had said you were going to enforce the rule less  
9 strictly on rebuttal. It does seem, however, that a lot of  
10 these documents could have been produced much earlier, and  
11 I'm not sure why we're receiving them so late. It is  
12 prejudicial to Costco to have to receive this voluminous  
13 amount of material in a short period of time in order to  
14 prepare for these hearings. You know, we all have other  
15 commitments and obligations on our side.

16 I had to go through some of these materials, and  
17 whereas I had objected the other day to the use of, I guess  
18 what's referred to as 557, the documents that Ms. Rosenfeld  
19 had submitted related to Dr. Cole and potentially  
20 Mr. Sullivan's testimony, you know, based on our initial  
21 review, we actually think these documents support our  
22 position and we're not opposed to using them today provided,  
23 however, that we may have a chance later, once we've had  
24 more time to digest these documents, to come back and  
25 comment on them. What I don't want to do is object just for

Page 9

1 the sake of objecting and cause this hearing to go on longer  
2 than it already has.

3 So we're trying to move things along as quickly as  
4 possible, but I would note that, you know, this rule has  
5 been there throughout the course of the hearing. I feel  
6 like everyone has worked very hard to comply with it. That  
7 said, it seems like it's beyond a pattern now from the other  
8 side to just dump these documents on us at the last minute  
9 without even an explanation as to why we're getting them so  
10 late in the process.

11 MR. GROSSMAN: Well, as I understood, their  
12 response in the e-mail was that they wouldn't, considering  
13 your objection, they wouldn't attempt to use it in the  
14 cross-examination of Mr. Sullivan but, rather, use it in  
15 their surrebuttal. Was I correct, Ms. Cordry?

16 MS. CORDRY: Yes. I mean, I'm not sure we really  
17 were prepared now to use it for Mr. Sullivan, but we will,  
18 we will deal with that. I mean, some of these, it's just --  
19 we all have other commitments, and some of us have  
20 commitments beyond other jobs. These were some things that  
21 seemed relevant, and we wanted to bring them in. Obviously,  
22 some of the other things we have since submitted since then  
23 were things that have issued in the last couple of days.  
24 So, obviously, I assume he's not objecting to bringing  
25 those, like the climate change reports you noticed and so

1 forth, but --

2 MR. GROSSMAN: Although I have to tell you, on the

3 climate change, you don't really expect me to litigate out

4 global warming here, do you? I mean --

5 MS. CORDRY: I do expect, when the EPA has made an

6 explicit finding that climate change is a threat to human

7 health and welfare and we are creating greenhouse gases here

8 that contribute to that climate change and so forth, I do

9 believe that that is extremely relevant, and we have tried

10 to make that point throughout the hearing. And I think this

11 only underscores yet again that this is not just a matter

12 of, you know, property values and homes washing away. There

13 is an explicit EPA finding to the effect that greenhouse

14 gases and climate change create a public health and welfare

15 endangerment. So, yes, we --

16 MR. GROSSMAN: I don't think it's going to be

17 appropriate for me to evaluate the impact of a gas station

18 on climate change in the context of this zoning application.

19 MS. CORDRY: Well --

20 MR. GROSSMAN: That's not, that's not what we

21 should be about in this. That's more of a legislative kind

22 of evaluation --

23 MS. CORDRY: Well --

24 MR. GROSSMAN: -- and it wouldn't make sense for

25 me to try to evaluate that area of science, would it?

1 MS. CORDRY: Well, considering these other areas,

2 my point is simply, if we have clear-cut determinations from

3 the official agencies of the world, the United States, the

4 State of Maryland, and Montgomery County that we do not

5 believe that greenhouse gases are something we should be --

6 that we're doing everything we can to try to reduce those

7 gases and if we have -- because they create adverse effects,

8 not only just property values but human health -- and when

9 you have a station that inherently creates idling and

10 greenhouse gases that do not now exist in the county and do

11 not have to exist without this station, we believe that is

12 absolutely an inherently adverse effect of this station, I

13 mean, I'm sorry, a non-inherent adverse effect of this

14 station and clearly does fit within the scope.

15 MR. GROSSMAN: I don't think there's any dispute

16 that there are non-inherent adverse effects, potentially,

17 from this station. That's not the issue. The issue is

18 whether or not I'm going to try to start evaluating evidence

19 on climate change as it pertains to this gas station. I'll

20 tell you right now, I am not about to do that. There's

21 plenty of evidence in this case for me to evaluate without

22 trying to take on that issue in the context of a

23 quasi-judicial proceeding as distinguished from a

24 legislative analysis, which is where it belongs.

25 So if you're going down that route, don't bother

1 because it's not going to be considered by me and, I

2 suspect, not by the, by the Board of Appeals. It's just not

3 something that's within the purview of this kind of

4 evaluation. Not everything can be resolved in a special

5 exception hearing.

6 MS. CORDRY: Obviously, we will abide by your

7 determination, but I'm not quite sure why that, which is an

8 undisputed adverse effect of this station, which is not

9 inherent to any other gas station in this county, is somehow

10 not something that is appropriate to be considered.

11 MR. GROSSMAN: All right.

12 MS. CORDRY: And we will continue to argue that to

13 the Board of Appeals.

14 MR. GROSSMAN: There's a difference between

15 considering the potential adverse effects of the gas station

16 and considering something as broad as climate change. So

17 it's such a different area that it just doesn't make sense

18 to go into it at a special exception hearing. So there you

19 go. Mr. Silverman.

20 MR. SILVERMAN: Another topic. With regard to

21 Mr. Goecke's objections to the documents, my observation has

22 been that throughout the hearing, as we discuss things,

23 there's a question of should this be admissible or should we

24 just consider the objections in terms of the weight.

25 MR. GROSSMAN: Yes.

1 MR. SILVERMAN: You seem to be more focused on the

2 weight of the evidence, which I appreciate and agree with,

3 and I'm just wondering if we'll have time with regard to his

4 objections, even his long list of objections, to go through

5 each document and discuss whether it is relevant, whether it

6 has weight, and whether it should be admissible or whether

7 it's going to be, whether we're going to -- whether you're

8 thinking about a, sort of, more sweeping ruling, you know,

9 we'll exclude newspaper articles or peer-reviewed documents,

10 like the one the Mr. Sullivan is relying on in terms the LA

11 and Las Vegas studies --

12 MR. GROSSMAN: Well --

13 MR. SILVERMAN: -- which is not peer-reviewed.

14 MR. GROSSMAN: -- as I think I said the last time

15 or the time before, I have looked at all of the objections,

16 and I made my kind of sweeping statements about the general

17 way I look at it. Then Mr. Goecke said he's going to look

18 again at his objections, and apparently he has. So then

19 we'll look at individual, the things that remain on his

20 individual list of objections and go through them one at a

21 time so you have a chance to respond.

22 MR. SILVERMAN: That's what I was hoping. I think

23 that --

24 MR. GROSSMAN: Right.

25 MR. SILVERMAN: -- will be very helpful to

Page 14

1 everybody.  
2 MR. GROSSMAN: Okay.  
3 MR. GOECKE: And if I may return back to my  
4 original objection on Exhibit 557. So if that's --  
5 MR. GROSSMAN: Yes.  
6 MR. GOECKE: -- the case, that they're not  
7 planning to ask Mr. Sullivan questions about those, that's  
8 fine. To the extent we get to Dr. Cole today and that he's  
9 prepared to testify -- you know, again, we haven't had them  
10 but for 48 hours -- that's fine if they want to ask that,  
11 but we would just reserve the right to cross-examine him  
12 about those documents at a later date.  
13 MS. CORDRY: Yes.  
14 MR. GROSSMAN: Certainly --  
15 MR. GOECKE: Okay.  
16 MR. GROSSMAN: -- I think that's fair.  
17 MS. CORDRY: I am sure we will not finish -- if we  
18 get to Dr. Cole today, I'm sure we will not finish him  
19 today.  
20 MR. GOECKE: And then --  
21 MR. GROSSMAN: Well, I hope we don't finish him  
22 either.  
23 MS. CORDRY: I didn't say finish him off.  
24 MR. GROSSMAN: I understand. Okay.  
25 MR. GOECKE: And then the next comment I would

Page 15

1 make is with the documents that Ms. Cordry e-mailed to us  
2 yesterday, and you know, these documents appear to be -- you  
3 know, again, we've got spreadsheets and reports that are not  
4 numbered by page, we've had less than 24 hours to review  
5 them, and it looks like she's cobbled together information  
6 from various sources. I think that this is probably  
7 something that's more appropriately addressed when she  
8 testifies about these documents rather than trying to have  
9 Mr. Sullivan talk about what she has prepared. We can  
10 address that, I guess, as we get to the questions, but I  
11 just wanted to note at the outset that we would object to  
12 using these documents in examining Mr. Sullivan today.  
13 MS. CORDRY: I would note that, as I said in the  
14 e-mail, these documents were presented months ago. These  
15 are an updated exhibit --  
16 MR. GROSSMAN: Not the spreadsheets.  
17 MS. CORDRY: The spreadsheets.  
18 MR. GROSSMAN: You mean the -- not the corrected  
19 spreadsheets.  
20 MS. CORDRY: No. No. I mean, the original  
21 spreadsheet was presented several months ago. It's Exhibit  
22 364(a), (b), and(c). The only changes in these documents  
23 are updating the numbers for 2013, and what I sent along was  
24 the printout pages from, directly copied from the EPA  
25 website that shows the numbers that I input on here. The

Page 16

1 only reason I did this was, rather than have 27 different  
2 pieces of paper from the EPA website, that it would be in  
3 one set piece.  
4 The other major spreadsheet here is one that was  
5 Mr. Sullivan's spreadsheet. So obviously, I assume, you're  
6 not going to have a problem with referring to that  
7 spreadsheet. And Mr. Sullivan has updated and has talked  
8 about updated, you know, 2013 numbers. I'm just trying to  
9 have them in a position where we can talk about the numbers  
10 from the beginning to the end in a form that we can use it.  
11 MR. GROSSMAN: Right. If the past is any  
12 indication, Ms. Cordry uses her own spreadsheets to kind of  
13 pull together evidence that's already in the record. So I'm  
14 not sure that there's a prejudicial effect, and her concept,  
15 I think, in using them is to try to expedite the process, if  
16 I --  
17 MS. CORDRY: Yes.  
18 MR. GROSSMAN: -- if I gather correctly. So let's  
19 see. If you have a specific objection to something, when  
20 it's posed, then make that objection at that point. I don't  
21 want to preclude her from using a spreadsheet that might  
22 facilitate the presentation, and as I say, if you find an  
23 objection, as we go along, please raise it and then we'll  
24 handle it then. All right?  
25 MR. GOECKE: Okay. Thank you.

Page 17

1 MR. GROSSMAN: Any other preliminary matters?  
2 MR. SILVERMAN: Yes. For the Coalition, I'd like  
3 to restate our concerns about conditions that are not  
4 enforceable by the Board of Appeals.  
5 MR. GROSSMAN: You don't have to restate anything.  
6 It's on the record if you have --  
7 MR. SILVERMAN: Okay.  
8 MR. GROSSMAN: -- if you've made an objection  
9 previously. We're not talking about conditions right now.  
10 So --  
11 MR. SILVERMAN: Right. Okay. All right.  
12 MR. GROSSMAN: All right.  
13 MR. SILVERMAN: I was just wondering if we could  
14 have Westfield as a party or through the jurisdiction of  
15 the --  
16 MR. GROSSMAN: Well, Westfield is not a party. I  
17 can't add them in at this point. So -- all right. So are  
18 we ready to resume? You're still under oath, Mr. Sullivan.  
19 (Witness previously sworn.)  
20 THE WITNESS: Yes, sir.  
21 MR. GROSSMAN: Welcome back.  
22 THE WITNESS: Thank you.  
23 MR. GROSSMAN: Ready to resume our --  
24 MS. CORDRY: Yes. Yes.  
25 MR. GROSSMAN: -- our examination?

Page 18

1 MS. CORDRY: And I will be going to an area  
2 different from what Ms. Rosenfeld was talking about because  
3 we're not duplicating, and I will let her come back --  
4 MR. GROSSMAN: Yes.  
5 MS. CORDRY: -- and pick up with what she was  
6 doing there.  
7 MR. GROSSMAN: Yes. We should note that  
8 Ms. Rosenfeld said that she has a proceeding before the  
9 Planning Board this morning. So Ms. Cordry is going to  
10 continue with the cross-examination, and by consent of the  
11 parties, Ms. Rosenfeld will pick up with her own examination  
12 later, but there won't be repetition here on what's  
13 presented.  
14 MS. ADELMAN: Oh, careful, Karen.  
15 MR. GROSSMAN: Yes. There's a --  
16 MS. CORDRY: Right, I see.  
17 REBUTTAL CROSS-EXAMINATION (Resumed)  
18 BY MS. CORDRY:  
19 Q All right. So I'm going to start with some  
20 questions about some of the underlying assumptions that go  
21 into all of your varying analyses from start to finish.  
22 I've given you Section 1.7.2 of your November 12th report,  
23 which was OZAH Exhibit 15(a), I believe, is the exhibit  
24 number in here, and do you recognize those pages?  
25 A They look familiar.

Page 19

1 Q Okay. Those would be the ones from your report  
2 that you prepared?  
3 A They appear to be.  
4 Q Okay. All right. And this is labeling several of  
5 the assumptions that you're working from. Can we just --  
6 A Ms. Cordry, what is this exhibit number? Is this  
7 getting, is this -- I can refer to this later?  
8 MR. GROSSMAN: It's not going to be a new exhibit  
9 number. It's just excerpts from Exhibit 15(a), according to  
10 Ms. Cordry, which is the exhibit number for your  
11 environmental report of November 2012.  
12 THE WITNESS: Thank you.  
13 MS. CORDRY: Yes, and I'm double-checking on the  
14 exhibit list, and that does appear to be the correct number.  
15 BY MS. CORDRY:  
16 Q Okay. So if we can just go through these very  
17 briefly, to start with. Is there any change in the  
18 assumptions that you're using here for the, subsection (a),  
19 the filling of the underground storage tank?  
20 A Not that I can recall, no.  
21 Q Okay. Or (b)?  
22 A On VOCs, in general, I don't recall --  
23 Q No, no. I'm sorry, (b), (b), part (b), the UST  
24 vent emissions.  
25 A I'm just referring to --

Page 20

1 Q Oh, I'm sorry.  
2 A -- each of these points that, on VOC spillage,  
3 gasoline dispensing, breathing losses, underground tanks.  
4 We did not change those numbers --  
5 Q Okay.  
6 A -- since the November 2012 report.  
7 Q Okay. And I'm sorry. Does that go beyond (b)?  
8 A It goes to all of them.  
9 Q Okay. Then (c), any change in (c)?  
10 A No, not that I can recall.  
11 Q Okay. Or (d)?  
12 A Same.  
13 Q Okay. Now, as far as (e), the vehicles queuing to  
14 purchase gas, can you clarify to us exactly currently what,  
15 what your numbers are and how you were applying those for  
16 the queuing cars?  
17 A Correct, those have changed.  
18 Q Okay.  
19 A In 2012 the one-hour was set at 40 cars. It's  
20 still 40 cars in the February 2014 rebuttal report.  
21 Q Okay. And are you referring to a particular page  
22 in your rebuttal report?  
23 A No --  
24 Q Okay.  
25 A -- I'm just giving you the numbers.

Page 21

1 Q Okay. Okay.  
2 A For eight hours we previously used 20 cars --  
3 Q Okay.  
4 A -- and that's been updated to 32 cars --  
5 Q Okay.  
6 A -- for the February 2014. For the 24-hour, we had  
7 previously, in 2012, used 10 vehicles. That's been updated  
8 to 20 vehicles. And these updates are also based upon the  
9 January 2013 traffic queuing analysis at Sterling that  
10 Mr. Guckert's company provided for us.  
11 Q Okay. I'm sorry. You're using 20 now for each of  
12 the 24-hour and annual averages?  
13 A No, 24, 24 hours --  
14 Q Okay.  
15 A -- and annual average was 10 in both cases. No,  
16 that did not change.  
17 Q Okay. I thought it had gone to 18 for --  
18 A We're using 20 cars for 24, and 10 for annual.  
19 Q Oh, okay. Okay. I thought you said it was 10 for  
20 each. Okay. So 20 cars for the 24 hours and 10 for the  
21 annual average. Okay.  
22 A Correct.  
23 Q All right. Now, turning to the roadways, which is  
24 something that Mr. Guckert testified about quite a bit and  
25 that you testified about a little bit, if we look at the

Page 22

1 next page here, which would be page 43 of your November  
2 report, this shows Exhibit 10 from Mr. Guckert's report, is  
3 that correct, from his original traffic report?  
4 A That's correct.  
5 Q And his original traffic report would have been  
6 OZAH Exhibit 11(a). Okay. And this is -- and I think we  
7 all understand, I think we all agree -- this represents his  
8 best projections for the total weekday peak-hour traffic  
9 with all of the background additions and including the  
10 warehouse and the gas station, is that correct?  
11 A That's my recollection.  
12 Q Okay. So these are the numbers you were using to  
13 analyze, when the gas station is up and in operation and the  
14 warehouse is operating and so forth, these are the numbers  
15 you would be using to try to analyze what the overall  
16 emissions from the station area would be, is that correct?  
17 A These, these numbers were the basis for our  
18 emissions assessments for roadways.  
19 Q Okay. So the figure 10 numbers? Okay.  
20 A Correct.  
21 Q All right. And did you use any changes from these  
22 numbers when you were doing your rebuttal report?  
23 A We did not.  
24 Q Okay. And I look at page 45 then in the same  
25 excerpt. This is at Table 1-7, which says: Updated traffic

Page 23

1 count used in this 2012 analysis. This was updated from  
2 what? Do you recall?  
3 A I don't recall.  
4 Q Was there a previous set of traffic counts? Did  
5 you work on this kind of an analysis with the earlier  
6 special exception application?  
7 A I don't, I don't recall what update this is  
8 referring to.  
9 Q Okay. So you don't recall if you had earlier  
10 numbers with the other application?  
11 MR. GROSSMAN: He just answered it twice now --  
12 MS. CORDRY: Okay.  
13 MR. GROSSMAN: -- he doesn't recall.  
14 MS. CORDRY: Okay. All right.  
15 BY MS. CORDRY:  
16 Q All right. And are the numbers on this table, are  
17 they derived from the figure 1-13 numbers, the ones that  
18 were Exhibit 10 in Mr. Guckert's report?  
19 A I believe they were, but I'm not prepared to go  
20 number by number to confirm that right now, but that's --  
21 that would be my recollection, yes.  
22 Q Okay. And one of the things I'm a little bit  
23 confused about is because you've got here, if I count them  
24 up, roughly, close to 40 intersections listed and  
25 Mr. Guckert had 20. Do you know how these intersections you

Page 24

1 have listed here correlate with Mr. Guckert's intersections?  
2 A I do not recall.  
3 Q Okay. Is there any list anywhere that you have in  
4 your records that correlates those?  
5 A I just don't recall.  
6 Q Okay. Do you recall how you got from the numbers,  
7 using the numbers on Figure 10 to creating this particular  
8 chart?  
9 A Well, I know for a fact that we used the peak  
10 between morning and afternoon rush as our basis and we  
11 interpreted Mr. Guckert's figure and used those figures, to  
12 the best of our ability, to come up with these counts that  
13 we then modeled, assuming that within the ring road -- the  
14 intersection along the ring road and inside -- that the peak  
15 value, which was evening, was used all the time the mall was  
16 open.  
17 Q Okay. And we'll get to that --  
18 A For the roadways --  
19 MR. GROSSMAN: He's speaking.  
20 THE WITNESS: -- beyond that, we used the peak  
21 count as a reference point and then scaled it by hour of  
22 day.  
23 BY MS. CORDRY:  
24 Q Okay. What I'm still trying to get to just at  
25 this point is trying to figure out, where you have, for

Page 25

1 instance, an intersection labeled University Boulevard  
2 Southwest 1, parenthesis 4, how does that correlate to any  
3 of the 20 intersections on Mr. Guckert's Exhibit 10 here,  
4 the one that you have labeled as Figure 1-13? That's where  
5 I'm trying to see if -- trying to correlate these numbers  
6 and cross-check them.  
7 A Well, I'm not, as I say, I'm not going to be able  
8 to today, as I sit here, go through and tell you every,  
9 every derivation --  
10 Q Okay.  
11 A -- but of course, we're modeling queuing at  
12 intersections, as well as free-flow. So we can break up  
13 intersections on that basis where Mr. Guckert could have had  
14 one. So there's clear reasons why we would have more than  
15 he may have shown in his analysis.  
16 Q Okay. But at this point, you can't, you can't  
17 correlate for me which, which are which?  
18 A I can't go through intersection by intersection,  
19 as I sit here today, and reconstruct on the stand --  
20 Q Okay.  
21 A -- where each one of these numbers came from --  
22 Q Okay.  
23 A -- but I gave you the general indication of what  
24 we did and that would apply.  
25 Q Okay. All right. So there are a couple of ones

Page 26

1 here that I can correlate. If you turn to the last page,  
2 46, the only ones that I can find that are, that clearly  
3 seem to correlate --  
4 MR. GROSSMAN: Well, wait a minute. You can't  
5 testify.  
6 MS. CORDRY: Well, I'm just going to ask him if he  
7 agrees with me that on page 46 there's one labeled  
8 Intersection 16, one labeled Intersection 20, and there's  
9 one labeled Intersection Gas Station. Those are --  
10 MR. GROSSMAN: I'm sorry. Which page? Which page  
11 are you on?  
12 MS. CORDRY: Page 46.  
13 MR. GROSSMAN: Okay.  
14 BY MS. CORDRY:  
15 Q I'm assuming those are the same Intersection 16  
16 that Mr. -- and these are labeled as Ring Road sites -- so  
17 I'm assuming these are the same 16 and 20 that Mr. Guckert  
18 has on his exhibit?  
19 A I believe they are, yes.  
20 Q Okay. And then there is, on the bottom of his  
21 Exhibit 10, which is your Figure 1-13, there's a small --  
22 which is on page 43 -- at the bottom there, there's a small  
23 circle that doesn't have a number for it but appears to be  
24 located at the site of the gas station.  
25 A That's correct. That would be called the Gas

Page 27

1 Station Intersection.  
2 Q Okay. So that is the one then that you were using  
3 as Gas Station Intersection on page 46?  
4 A The one that's labeled Intersection Gas Station --  
5 Q Yes.  
6 A -- on page 46 would be that unnamed circle on --  
7 Q Okay.  
8 A -- Figure 10 -- Exhibit 10.  
9 Q And you took these three intersections, and you  
10 averaged those to come up with a, what you have put there,  
11 just above there, as an asterisk Ring Road South Average?  
12 A That is correct. We averaged --  
13 Q Okay. Okay.  
14 A -- Intersection 16, 20, and the gas station to  
15 come up with an estimate of traffic on the southern ring  
16 road.  
17 Q Okay. And on the page before that, that's what's  
18 labeled RING5 with the asterisk there right at the bottom of  
19 the page?  
20 A Ring Road 5 is the southern ring road.  
21 Q Okay. And that's that average that you just did?  
22 A Correct.  
23 Q Okay. All right. And I think, as you just  
24 indicated again, because you were using this weekday peak  
25 average, you've been using that -- well, let me come back.

Page 28

1 You initially had been stating through most of your reports  
2 that you were using that peak hour for all the time that the  
3 station was open, is that correct?  
4 A That peak hour was used for all the hours the  
5 station was open, that's correct.  
6 Q Okay. And I may have just missed it. Did you  
7 say, are you doing something now --  
8 A We --  
9 Q -- with the most recent report?  
10 A No. We're still using that extremely conservative  
11 approach of assuming that weekday p.m. peak --  
12 Q Okay. I thought --  
13 A -- occurs all the time, not just --  
14 Q Okay.  
15 A -- during the weekday period, but every hour and  
16 every day of the week.  
17 Q Okay. I thought I heard you say something about  
18 using a scaler now or something. Was that --  
19 A No. The scalers have always been used for the  
20 roadways outside the ring road.  
21 Q Okay. So the roadways outside the ring road.  
22 A Public roads.  
23 Q Okay. All right.  
24 A I should not so call it public roads. Roads  
25 outside the mall area.

Page 29

1 Q Okay. So where are you distinguishing between  
2 outside the mall? Are you just -- are the only ones you're  
3 saying that you used the peak hour for, the ring road  
4 themselves, intersections, or are you using the ones, the  
5 direct entrances to the mall as well?  
6 A My recollection is, the intersections involving  
7 the ring road --  
8 Q Okay.  
9 A -- the ring road itself --  
10 Q Right.  
11 A -- and parking lot activity is all based upon the  
12 use of the peak weekday traffic counts from Mr. Guckert.  
13 Q Okay. And for, let's say -- okay. So  
14 Intersection 16, for instance, as we've gone through  
15 ad nauseam, is the intersection where the Valley View  
16 entrance comes up to the ring road. Where Valley View and  
17 University Boulevard comes together, is that something  
18 you're saying you have used a scaler on, on that kind of  
19 intersection there?  
20 A Wait. Which, which --  
21 Q Okay.  
22 A -- which point are you referring to in this Figure  
23 10?  
24 Q Okay.  
25 MS. CORDRY: Can I borrow the magic pointer?



Page 30

1 MR. GROSSMAN: Certainly. You know I love when  
2 it's used.  
3 MS. CORDRY: Yes, I know.  
4 MR. SILVERMAN: Mr. Grossman, I --  
5 MR. GROSSMAN: You don't want to object to  
6 Ms. Cordry's question, do you?  
7 MR. SILVERMAN: No. I just want a definition of  
8 scaler, and I wasn't going to ask, but Dr. Cole just asked  
9 me the question. So if he doesn't know, nobody does.  
10 MS. CORDRY: All right. Well, we'll get to that  
11 in accordance.  
12 MR. GROSSMAN: All right.  
13 BY MS. CORDRY:  
14 Q All right. So the one here that I'm pointing to,  
15 which is Intersection 16 at the intersection of the Valley  
16 View entrance and the ring road, that is one you said you  
17 used the peak-hour number for the entire time the station is  
18 open, correct?  
19 A My recollection is, anything along the ring road  
20 or inside, my recollection is we used the peak hour.  
21 Roadways beyond, such as Veirs Mill, University, and Georgia  
22 Avenue, we'd have addressed those by hour-of-day scaler.  
23 Q Okay. And by a scaler, you mean that if the peak  
24 hour is 100 percent, then noon might be 70 percent of that.  
25 So you would take 70 percent of the peak hour and use that

Page 31

1 as the figure you were using. Is that, is that what you  
2 mean by that, or --  
3 A Well, putting aside that --  
4 Q -- tell us if it's something else.  
5 A Putting aside that I'm not -- you're using an  
6 example; you're not saying that it is 70 percent.  
7 Q It's just an example.  
8 A We are using the scaler relative to the peak based  
9 upon standard typical traffic flow during the course of a  
10 day, to be able to more accurately account for diurnal  
11 changes in traffic as it relates to meteorology.  
12 MR. GROSSMAN: Since that question was asked, what  
13 is a scaler, you're saying a scaler is a percentage of the  
14 full amount?  
15 THE WITNESS: Or a fraction of the full amount, of  
16 the peak amount.  
17 MR. GROSSMAN: Okay.  
18 BY MS. CORDRY:  
19 Q Okay. Do you know if that scalers, scalers you're  
20 using have ever been put into the record in the case to this  
21 point?  
22 A They have.  
23 Q And where would that be?  
24 A On the data disks that were provided for the  
25 modeling, November 2012.

Page 32

1 Q Okay. And do you know if your reports have  
2 specifically referenced -- the written reports as opposed to  
3 the data disks, have they specifically referenced that you  
4 were using these scalers for the roads outside the ring  
5 road?  
6 A I don't recall if it's in the text, but it clearly  
7 is shown in the modeling files.  
8 Q Okay.  
9 MR. GROSSMAN: How exactly does this tie in with  
10 his direct rebuttal testimony? That's --  
11 MS. CORDRY: Well, his rebuttal testimony, well,  
12 he's talked a great deal about how conservative it is and  
13 what the numbers are and what he's doing, and I'm setting up  
14 what I understand him to be saying, and we're going to, in  
15 just a moment, see where it goes to the question of the  
16 conservatism in his numbers.  
17 MR. GROSSMAN: Okay.  
18 MS. CORDRY: So I'm just trying to understand for  
19 sure just now what it was he was doing, because I will say,  
20 not having tried to go through every line in the data disks,  
21 I was not aware until this point that there was actually  
22 scalers being used on the roads outside the ring road. I  
23 was reading the testimony about, or the reports about using  
24 the peak hour and the conservatism that, as applying across  
25 the board. So that --

Page 33

1 MR. GROSSMAN: I understand. I'm not trying to  
2 limit you --  
3 MS. CORDRY: No.  
4 MR. GROSSMAN: -- except that we do have to limit  
5 to the direct rebuttal --  
6 MS. CORDRY: Right.  
7 MR. GROSSMAN: -- and I just want to make sure  
8 that you're tying that in.  
9 MS. CORDRY: Yes, it is. Well --  
10 MR. GROSSMAN: Okay.  
11 MS. CORDRY: -- he's testified about the traffic  
12 he used and how conservative that is and what the peak hours  
13 were and so forth. So that's what I'm trying to get to  
14 right now.  
15 BY MS. CORDRY:  
16 Q Okay. Would it be possible -- I don't know if  
17 we'll get to this today; if we don't, we don't -- but is it  
18 possible during the day to get that correlation?  
19 Presumably, I assume, you have a sheet somewhere that says  
20 the correlation between the various intersections and -- in  
21 Mr. Guckert's report and your intersections. Is that  
22 possible?  
23 A Today? I would say -- I would say, no.  
24 Q Okay. It does still exist, though, somewhere?  
25 A We can certainly reconstruct it, but I can't

Page 34

1 reconstruct it on the stand --  
2 Q Okay. I'm just --  
3 A -- and I'm not going to reconstruct it without an  
4 opportunity to quality control it. So I'd suggest referring  
5 to Mr. Guckert's report and my modeling files to make that  
6 evaluation.  
7 Q Okay. And in terms of the data you got, the  
8 figure 10 and so forth, did you just get Mr. Guckert's  
9 report and work from that, or did you have any face-to-face  
10 discussion with him about the traffic numbers?  
11 A Myself and my staff did have communication by  
12 phone with Mr. Guckert about the report and based our  
13 analysis on his direct report and those discussions.  
14 Q Okay. So you've had phone conversations but not  
15 face-to-face meetings on it?  
16 A I don't recall face-to-face. I do recall phone --  
17 Q Okay.  
18 A -- contact.  
19 Q All right. If we stick to, let's say,  
20 Intersection 16 and 20 and the gas station intersection,  
21 which we know where our correlation is coming from, can you  
22 tell me exactly where in Mr. Guckert's report you got the  
23 numbers that you have showing here; that, for instance,  
24 Intersection 16, it shows 379 for the morning peak and 824  
25 for the evening peak?

Page 35

1 A The -- well, it's right from Mr. Guckert's report.  
2 Q Well, I understand, but where? He had a lot of  
3 numbers in his report. Can you -- do you know where in that  
4 report they came from?  
5 A You're referring to Intersection 16?  
6 Q Yes.  
7 A He shows, he shows which vehicles are turning into  
8 that area, and the count, the counts are based upon -- for  
9 example, 16, we have counts of 338, 79, 296, and 111. Those  
10 are the various components that tied into the ring road. So  
11 that totals 824 for Intersection 16.  
12 Q Wait a minute. Let me, let me -- and are you  
13 getting that from Exhibit 10?  
14 A Correct.  
15 Q Which, of course, is pretty unreadable. So let  
16 me, let me, instead of doing that, let me show you, than  
17 trying to read off that particular chart there, which is  
18 pretty unreadable, let me hand around again what we have  
19 used at the previous discussions, which are the printouts of  
20 the pages from Mr. Guckert's report.  
21 MS. CORDRY: I found some extra copies of this.  
22 So --  
23 MR. GROSSMAN: Thank you.  
24 MS. CORDRY: -- I made it again.  
25 BY MS. CORDRY:

Page 36

1 Q What we have, the second page of that is -- the  
2 second page of that is Intersection 16, is that correct?  
3 A I need to get some glasses, sorry.  
4 Q Okay. I understand the feeling well, which is why  
5 I was trying not to squint at this particular printout in  
6 your chart too.  
7 A I'm sorry. What was your question, Ms. Cordry?  
8 Q Okay. If you just look at the second page there,  
9 which is marked, it has handwritten 16 at the top. Do you  
10 see that?  
11 A Yes, I do.  
12 Q Okay. And that's labeled West Mall Access, Valley  
13 View Avenue, and Loop Road under Vehicle Turning Count  
14 Movement, and then directly under there it says,  
15 Intersection of Loop Road and West Mall Access, Valley View.  
16 A I guess I don't see that. I see Vehicle Turning  
17 Movement Count Summary.  
18 Q Okay. Right up here at the top.  
19 A On page 97, you're showing --  
20 Q Yes. Yes.  
21 A -- of his document?  
22 Q Yes.  
23 A I'm on page 97.  
24 Q Okay. And at the top, under Vehicle Turning  
25 Moving Count Summary, directly under there it says,

Page 37

1 Intersection of Loop Road and West Mall Access, Valley View  
2 Avenue.  
3 A Okay.  
4 Q Okay. So this is Intersection 16.  
5 A I see that, yes.  
6 Q Okay. All right. And it labels about halfway  
7 down there peak hour, 8:30 to 9:30 in the morning.  
8 A Peak hour, 8:30 -- okay.  
9 Q What's the number it has there?  
10 A Ms. Cordry, I can tell you it's 144, but if you  
11 want to know how I reconstructed my numbers --  
12 Q No. I'm asking you, what is the number that is  
13 listed as the peak-hour total there on the --  
14 A Well, it's 144.  
15 Q 144? Where are you getting that?  
16 A You said, 8:30 to 9:30, peak hour?  
17 Q That's only for one set of turning movements. All  
18 the way at the left-hand page --  
19 A I'd like to just say for the record that I haven't  
20 looked at this data for years. I can tell you exactly what  
21 we did to come up with our numbers for the southern ring  
22 road, but I'm not going to be able to reconstruct from this  
23 particular table here --  
24 Q Well, I'm asking you --  
25 A -- in a quick period of time.

Page 38

1 Q -- you said you were using Mr. Guckert's data. So  
2 I'm asking you, with Mr. Guckert's data here, which he has  
3 verified on his testimony, this number here, which is the  
4 total number of cars, the number on the left-hand side is  
5 the total number of cars --  
6 MR. GROSSMAN: You mean the right-hand side.  
7 BY MS. CORDRY:  
8 Q I'm sorry, the right, north and south and east and  
9 west. Would you read that number for us?  
10 A I can read, I just want to clarify, I can read  
11 numbers all day if you want, but my point is we relied upon  
12 Exhibit 10, and I can give you the basis for each  
13 intersection, but for me to go through these and verify  
14 numbers, I'm not going to get you where you want to go.  
15 MR. GROSSMAN: Okay. So just, she's asking you to  
16 read that number on the right-hand, extreme right-hand  
17 column for the total of Intersection 16 peak hour, 8:30 to  
18 9:30. What does it say?  
19 THE WITNESS: It says 593.  
20 MR. GROSSMAN: Okay.  
21 BY MS. CORDRY:  
22 Q Okay. And this is a number that was taken, the  
23 existing traffic, correct, the September reports?  
24 A I don't recall the basis of this table.  
25 Q Okay.

Page 39

1 A Our data did not come from this table. Our data  
2 came from Exhibit -- information like Exhibit 10, the  
3 figures shown in his report.  
4 Q We will get to Exhibit 10 in a moment, but let's  
5 just stay with this. This was, I think --  
6 MR. GROSSMAN: Well, he's already --  
7 MS. CORDRY: Okay.  
8 MR. GROSSMAN: -- he's answered the question.  
9 He's given you the number that it says on that table. He  
10 says he didn't use that table to derive his figures --  
11 MS. CORDRY: Well, I am --  
12 MR. GROSSMAN: -- he used Exhibit 10, which is not  
13 an OZAH exhibit; it's the exhibit 10 from the traffic  
14 report, which is a diagram. --  
15 MS. CORDRY: I know, and I will ask, I will ask  
16 him to add the numbers up on Exhibit 10 again if he wants  
17 to, but that -- we also did this with Mr. Guckert last week,  
18 and they are not going to come out to the numbers he has  
19 here. That's my point and --  
20 MR. GROSSMAN: Well, we'll find out.  
21 MS. CORDRY: Okay.  
22 MR. GROSSMAN: You can ask him about how he  
23 derived his numbers, which is what he's saying. He did not  
24 use the table that you just referenced. He used --  
25 MS. CORDRY: I understand, but I'm asking him

Page 40

1 if --  
2 BY MS. CORDRY:  
3 Q Mr. Guckert, you do recall that Mr. Guckert  
4 testified and that these are the numbers of the existing  
5 traffic at those intersections?  
6 MR. GROSSMAN: That's not the point. The point is  
7 he said he didn't use that table. How many times are you  
8 going to ask him the same question?  
9 MS. CORDRY: The question I was going to ask him,  
10 after he simply read the number, was, is this number for  
11 existing traffic already substantially higher than the  
12 number you say you were using for all of the traffic in the  
13 mall plus the background plus the gas station.  
14 MR. GROSSMAN: Well, all right, you can ask him  
15 that question, but you --  
16 MS. CORDRY: I was trying to get there, because  
17 all I wanted him to do was read the 593 so we could compare  
18 it.  
19 MR. GOECKE: Excuse me. Where's the 593 on this  
20 chart?  
21 MS. CORDRY: Right here.  
22 MR. GROSSMAN: 593 is the column, she's --  
23 MR. GOECKE: 573?  
24 MS. CORDRY: You're on Exhibit 4.  
25 MR. GOECKE: Thank you.

Page 41

1 MS. CORDRY: I mean, Intersection 4.  
2 MR. GROSSMAN: Extreme right-hand column --  
3 MS. CORDRY: Right.  
4 MR. GROSSMAN: -- of --  
5 MR. GOECKE: I found it. Thank you.  
6 MR. GROSSMAN: Okay.  
7 BY MS. CORDRY:  
8 Q Okay. So if you will accept for the moment  
9 Mr. Guckert's testimony that this is the existing traffic at  
10 that intersection, is that not already substantially higher  
11 than the number you were using for the final total with  
12 background and with gas station?  
13 A No, not.  
14 Q 593 is not substantially higher than 379?  
15 A For Intersection 16?  
16 Q Yes.  
17 A We use 824.  
18 Q That's the evening. I'm talking about the morning  
19 peak hours.  
20 A We didn't use the morning.  
21 Q Okay. Then we'll look at -- we're doing this one  
22 at a time -- look at the bottom. This is the evening peak  
23 hour.  
24 A Okay.  
25 Q And what's that number?

Page 42

1 A That number says 1037.  
2 Q Okay. Is that not substantially higher than 824?  
3 A It's higher than 8 -- but, again, I don't know the  
4 basis for these numbers. It is higher, clearly higher than  
5 824, but I'll say again, we relied upon Exhibit 10 in his  
6 report, not this table.  
7 Q All right. Well, we'll get to Exhibit 10 in a  
8 moment. Just try not to jump ahead too fast. I'm trying to  
9 take this step by step. So the existing numbers are higher  
10 than the numbers you have here?  
11 A I do not know the basis for this table you're  
12 referring to versus the numbers we used.  
13 Q Okay.  
14 A I'll tell you what I used --  
15 MR. GROSSMAN: Stop going over that over and over  
16 again. He's already said it at least four times. He  
17 didn't --  
18 MS. CORDRY: Okay. I'm --  
19 MR. GROSSMAN: -- use that table.  
20 MS. CORDRY: Well, whether he used it or not, the  
21 record in this --  
22 MR. GROSSMAN: I know, but he's answered the  
23 question. Just --  
24 MS. CORDRY: Okay.  
25 MR. GROSSMAN: -- move on to the next question.

Page 43

1 MS. CORDRY: I am trying to move on. Please, I  
2 really am, because I am trying to find, for instance, where  
3 he came up with the numbers for this; so we'll get there.  
4 MR. GROSSMAN: I understand.  
5 MS. CORDRY: All right.  
6 MR. GROSSMAN: He's already answered he does not  
7 know where these numbers came from in the table --  
8 MS. CORDRY: Well --  
9 MR. GROSSMAN: -- you were just reading from.  
10 MS. CORDRY: Okay.  
11 MR. GROSSMAN: He's used Mr. Guckert's Exhibit  
12 10 --  
13 MS. CORDRY: All right.  
14 MR. GROSSMAN: -- from his original traffic count  
15 report to get his numbers. That's what --  
16 MS. CORDRY: And I am --  
17 MR. GROSSMAN: -- that's what the witness has  
18 testified numerous times now.  
19 MS. CORDRY: All right.  
20 MR. GROSSMAN: Now, whether they're correct or  
21 incorrect is a different question. That's -- he's answered  
22 what his knowledge is and what he used.  
23 BY MS. CORDRY:  
24 Q All right. Let's go to Exhibit 10. Did I give  
25 you a copy of that yet?

Page 44

1 A I have Exhibit 10.  
2 Q I have them, which are a little bigger than --  
3 and, actually, I have Exhibits 3, which are the existing  
4 peak-hour traffic volumes, which are what are showing on  
5 that chart there; then Exhibit 7, which Mr. Guckert  
6 testified were added in the background peak hours, I mean,  
7 I'm sorry, the additional --  
8 MR. GROSSMAN: Just to make sure, the exhibits  
9 you're referring to now, the numbers are Mr. Guckert's  
10 exhibits?  
11 MS. CORDRY: Yes, these are Mr. Guckert's numbers  
12 from his Exhibit 11 --  
13 MR. GROSSMAN: Right.  
14 MS. CORDRY: -- that we went over in his  
15 testimony.  
16 BY MS. CORDRY:  
17 Q Exhibit 7 is the background, adding in the  
18 background peak hours --  
19 MR. GROSSMAN: Let's try, whenever you refer to a  
20 Guckert exhibit number, call it Guckert Exhibit No. --  
21 MS. CORDRY: Okay.  
22 MR. GROSSMAN: -- so that we don't get --  
23 MS. CORDRY: All right.  
24 MR. GROSSMAN: -- the record confused as to what  
25 exhibit numbers you're referring to --

Page 45

1 MS. CORDRY: Right. Right.  
2 MR. GROSSMAN: -- since he uses the same numbering  
3 system for different exhibit numbers.  
4 MS. CORDRY: Right, and then we have numbers and  
5 we have figures and we have appendixes --  
6 MR. GROSSMAN: Right. Right. Right.  
7 MS. CORDRY: -- and yes, it gets very elaborate  
8 quite often.  
9 BY MS. CORDRY:  
10 Q All right. Let's skip over Exhibit 7. We'll just  
11 go to Exhibit 10. It's a little bigger; so it's a little  
12 easier to read here.  
13 MR. GOECKE: I'm sorry. Is this Guckert 10 or --  
14 MS. CORDRY: This is Guckert 10, yes.  
15 MR. GOECKE: Thank you.  
16 MS. CORDRY: And I unfortunately did not throw in  
17 the big calculator that I had here, but we can look at this  
18 as we go through. One moment.  
19 BY MS. CORDRY:  
20 Q If I read around Intersection 16 there, which is  
21 in Inset A, for the evening peak hour, which are the numbers  
22 that are in the parenthesis, correct?  
23 A That's correct.  
24 Q Okay. Starting on the left-hand side, I have 363,  
25 338, 296, 111, 79, and 280. Is it your statement that those

Page 46

1 numbers add up to 824?  
2 A No, it's not.  
3 Q Okay. What do they add up to?  
4 A Well, we didn't use all the numbers you just  
5 mentioned.  
6 Q Okay. So which numbers did you use?  
7 A We used 338, 79, 296, and 111.  
8 Q Okay. So we left out the 363 and the 280, and  
9 those are -- so even though they're coming through that  
10 intersection, you're not counting them because they are  
11 going left and right at that intersection; they're not  
12 coming down towards the station?  
13 A They're not going to the south. I'm modeling the  
14 south ring road with this. I'm referring to the segment  
15 that goes from Intersection 16 south, Intersection 20.  
16 We're modeling cars going to the south along that road, and  
17 those four numbers I just gave you were the basis for the  
18 824 that we used.  
19 Q Okay. So those cars that are sitting there and  
20 idling perhaps or coming through that intersection, you're  
21 not counting them in your analysis of how much traffic there  
22 is there?  
23 A That's not correct.  
24 Q Okay. So what are you doing with those other  
25 numbers, the, what did we say, the 280 and the 363?

Page 47

1 A We're modeling that. At that intersection,  
2 there's a queue there. We're modeling the queue. I thought  
3 you were asking about the southern ring road and the basis  
4 for the, how we, I averaged 16, 20, and the gas station  
5 intersection. Yeah, we used the numbers you said, but of  
6 course we modeled each intersection as well.  
7 Q Well, that's all a part of Intersection 16, isn't  
8 it? Is there anything in here that indicates that this is,  
9 that you're, that you're modeling only half of Intersection  
10 16 or two-thirds of it, I guess?  
11 A I don't know why you'd assume that. In the --  
12 Q Well --  
13 A -- our November 2012 report and the modeling files  
14 that accompany it clearly show we modeled each intersection  
15 as well as the ring road and University and all the, and the  
16 rest that I described.  
17 MR. GROSSMAN: So are you saying that when you  
18 modeled the intersection, you used all the numbers but, when  
19 you modeled the southern ring road, you only used those to  
20 indicate traffic along the southern ring road?  
21 THE WITNESS: Correct. When we're modeling the  
22 queue, we're modeling all the cars that would be involved in  
23 that queue, which are where they're going to turn  
24 afterwards, but when modeling the southern ring road, we  
25 just use cars that are going to the south towards Target,

Page 48

1 Costco, and so forth.  
2 MR. GROSSMAN: All right. It sounds to me,  
3 Ms. Cordry, that that would account for the difference --  
4 MS. CORDRY: Well, it --  
5 MR. GROSSMAN: -- in the numbers that you  
6 apparently observed.  
7 MS. CORDRY: Well, it would if I could figure out  
8 where this, where it shows that there is some other place  
9 where those numbers come in, because --  
10 MR. GROSSMAN: You mean the -- well, Mr. Sullivan  
11 has testified that there is a separate modeling for each  
12 intersection in which all the numbers are considered.  
13 MS. CORDRY: Well, that's what I'm trying to  
14 figure out, because, you know, this labels -- the RING5 is  
15 labeling Intersection 16 as such, and it doesn't say that  
16 it's only analyzing part of the intersection 16 numbers.  
17 MR. GROSSMAN: You're looking at Mr. Guckert's  
18 things.  
19 MS. CORDRY: No, no. I'm looking at  
20 Mr. Sullivan's numbers here --  
21 MR. GROSSMAN: I see.  
22 MS. CORDRY: -- and I'm trying to determine where  
23 else those numbers would, the 363 and the 280, would show  
24 up.  
25 MR. GROSSMAN: All right. Well, let's get that

Page 49

1 answer. Where else in your materials would that show up?  
2 THE WITNESS: If you want to see the actual basis  
3 for our emissions for each of the intersections, which are  
4 the Area 1, 2, 3, and so forth, sources in our files, you  
5 need to look at our data disks and the files that, and the  
6 spreadsheets, that describe how we handled the queues and  
7 what the basis for those numbers were, but that's part of  
8 the data disk package. And, I mean, I can't reconstruct  
9 each one now, but I'm saying those numbers haven't changed  
10 since we provided those a year and a half ago.  
11 BY MS. CORDRY:  
12 Q Okay. Because I'm just, I'm just looking at this  
13 and I can't -- you know, if you take out those other two  
14 numbers, that's 643 additional cars compared to the 824 that  
15 you have listed there as Intersection 16. I mean, I don't  
16 see any place where --  
17 MR. GROSSMAN: No, but now he's answered that.  
18 MS. CORDRY: Well, no. I'm just trying to look  
19 on, whether, is it included in any of these other RING1  
20 numbers or something like that? Are they separate there,  
21 because I don't see it there either? I'm just trying to --  
22 THE WITNESS: Again, I'll refer you to the -- I'm  
23 sorry. I'll refer you to the data disk for the detail,  
24 detail, but it's all there.  
25 BY MS. CORDRY:

Page 50

1 Q Okay. And that would be the same thing -- if the  
2 numbers for Intersection 20 are also substantially lower  
3 here, then the numbers that are shown in Exhibit 10 for the  
4 entirety of Intersection 20, that would be your same  
5 analysis, that you're only counting the directions that go  
6 towards the store?  
7 A Well, that question, I can't -- that's not a clear  
8 question to me. Can you repeat that, because I'm not sure  
9 even what you're asking me.  
10 Q Okay. Well, the question is, if I went through  
11 the same analysis with Intersection 20, again, the numbers  
12 that you have here are substantially smaller than the  
13 totality of the numbers listed on Mr. Guckert's Exhibit 10  
14 at Intersection 20.  
15 A Are you referring to the cars going to the  
16 south --  
17 Q Well, I am --  
18 A -- is lower than the total intersection? Is that  
19 the question?  
20 Q Yes. What I'm saying is, where you labeled here  
21 Intersection 20 and the numbers you have labeled here are,  
22 again, substantially smaller than the totality of all the  
23 numbers listed on Intersection 20 on Mr. Guckert's Exhibit  
24 10.  
25 A Well, my statement would be that the vehicles

Page 51

1 going to the south is a smaller number than all the vehicles  
2 associated with that intersection because some are going  
3 different ways.  
4 MR. GROSSMAN: So, essentially, it's the same --  
5 MS. CORDRY: So that's the same --  
6 MR. GROSSMAN: -- same analysis --  
7 MS. CORDRY: Okay.  
8 MR. GROSSMAN: -- as applied to Intersection 16.  
9 MS. CORDRY: All right.  
10 BY MS. CORDRY:  
11 Q Now, as far as the gas station intersection,  
12 should that include all of the numbers?  
13 A I can tell you the numbers we included and our  
14 basis for those numbers.  
15 Q Okay.  
16 A And the basis would be the 67 vehicles --  
17 Q Okay.  
18 A -- the 130 --  
19 Q Okay.  
20 A -- 80, and 94.  
21 Q And the ones you excluded are the 67 and 80 that  
22 are coming out of that road and traveling along the ring  
23 road there?  
24 A They're already counted, is my recollection, in  
25 the other numbers, the numbers for the southern ring road.

Page 52

1 So those were not added. It would be duplicative to add  
2 those in, but the -- but if you add up the four numbers that  
3 are applicable, they total the 371 for that intersection.  
4 67, 130, 80, and 94 are the ones that are separable from the  
5 ones already counted.  
6 Q And how did you determine that those have already  
7 been counted in the ring road?  
8 A My recollection is -- and, again, I haven't  
9 reconstructed this in a long time -- is that they're  
10 included in the ring road numbers already, in those counts.  
11 The vehicles going towards 16 or 20 would be included in  
12 those counts.  
13 Q Now, are you familiar with Dr. Adelman's testimony  
14 that based on his observations, that the actual average  
15 evening peak-hour traffic volumes were about 15 percent  
16 higher at Intersection 16 than the number that Mr. Guckert  
17 was projecting?  
18 A I don't recall hearing Dr. Adelman's testimony.  
19 Q If, in fact, the traffic there was about 15  
20 percent higher, would that affect your numbers at all?  
21 A You need to give me some context for Dr. Adelman's  
22 analysis.  
23 Q Okay. Dr. Adelman testified that he and  
24 Mrs. Adelman sat at Intersection 16 for, I think it was  
25 about eight or 10 nights in April and May and actually did

Page 53

1 counts again of that intersection and that the numbers  
2 there, rather than the 1291 -- and for this purpose,  
3 Mr. Guckert counted all of the cars at the intersection as  
4 did Ms. Adelman and Dr. Adelman -- that as opposed to the  
5 1291, which was the total that Mr. Guckert was projecting at  
6 the intersection there, that they actually counted 1494.  
7 A So what, I'm sorry, what's your question?  
8 Q Well, so the question is, okay, that number is  
9 about 15 percent higher. If, in fact, the evening volume  
10 was about 15 percent higher than what Mr. Guckert was  
11 projecting, would that affect your numbers?  
12 A I'd have to analyze the representativeness of  
13 their analysis as compared to Mr. Guckert's analysis  
14 relative to when the store opened and what was going on. I  
15 mean --  
16 Q Okay.  
17 A -- it takes, it would take analysis, and I haven't  
18 done that analysis.  
19 Q Okay. Well, I'm just asking you as an expert, if  
20 you accept the fact that they took numbers after the store  
21 opened for 10 days and not just one, as Mr. Guckert did,  
22 eight to 10 -- I forget exactly the precise number, but the  
23 exhibit is in the record -- and if over those eight to 10  
24 days the number was 15 percent higher overall than what  
25 Mr. Guckert was projecting, would that affect your



Page 58

1 A Okay.

2 Q Okay. So that would indicate that the, assuming

3 what we've been saying up until now is all correct, that the

4 175th hour falls within the weekend peak time, doesn't it --

5 A No.

6 Q -- not the weekday?

7 A It does not.

8 Q Well, if we said 208 days --

9 MR. GROSSMAN: Well, let's ask him why.

10 MS. CORDRY: Okay. All right. Sure.

11 BY MS. CORDRY:

12 Q Tell me why.

13 A One rather important factor you're omitting is the

14 point I made earlier, is that the weekend peak occurs during

15 midday, around noontime, when we have excellent dispersion

16 conditions, tends to have higher wind speeds, less impact

17 per gram emitted to the atmosphere than in the evening when

18 the evening peak during the weekdays happens around 7:00

19 p.m. or so, when we have, we have much more restricted

20 dispersion conditions, and those factors are important

21 relative to a, you know, 15, 20 percent difference you're

22 going to see in the peak values weekend/weekday.

23 Q Okay. Well, in the first place, you were talking

24 before that the 175th traffic volume hour, I thought, and

25 now you've gone, you've moved away from the traffic and now

Page 59

1 you're talking that -- you're going to your whole dispersion

2 analysis to decide what the 175th hour is?

3 A Well, the --

4 Q I thought before -- yes, go ahead.

5 A -- analysis is based upon modeling, right?

6 Q I understand, but I thought --

7 A And so I'm trying, what I'm trying to say is I --

8 if you cut to the chase, the southern ring road during the

9 peak weekend has 23 percent higher traffic volume than the

10 peak weekday value, but your question was, is that -- what

11 effect is that going to have on the bottom-line modeling,

12 and what I'm telling you is, the fact is that the peak

13 that's happening during the weekdays, which happens five out

14 of seven days of the week, happens to occur during a time

15 when there's much more restrictive meteorologic conditions

16 in general, which would much more than compensate for that

17 23 percent factor. That's just one point.

18 Q Okay. But actually, Mr. Sullivan --

19 A In addition to that --

20 Q -- if you could stop just a --

21 MR. GOECKE: If he could just finish.

22 MR. GROSSMAN: Let him finish his answer.

23 MS. CORDRY: Could I -- I mean, he's not really

24 answering my question.

25 MR. GROSSMAN: No, let him finish his --

Page 60

1 MS. CORDRY: Okay.

2 MR. GROSSMAN: -- I'm going to get to your

3 question in a second. Let him finish his answer, though.

4 MS. CORDRY: Okay. Fine.

5 THE WITNESS: In addition to that, the statement

6 I'm making about the 23 percent, well, that's assuming that

7 the weekday peak -- happens two days of the week during a,

8 several hours per day -- that happens all the time. That

9 happens weekend, weekday, 7:00 in the morning, 10:00 at --

10 that's what happens all the time. We know that's not true.

11 So the overall conservatism in approach much more than

12 compensates for 23 percent difference in traffic volume

13 between those two different peaks.

14 MR. GROSSMAN: All right.

15 MS. CORDRY: Okay.

16 MR. GROSSMAN: Hold on one second. But what she

17 asked you was, when you talk about the 175th hour that you

18 took, she's asking, is that a derivation from the traffic or

19 are you talking about 175th worst pollution hour? That's --

20 THE WITNESS: It's the --

21 MR. GROSSMAN: -- I think, what she was asking.

22 THE WITNESS: It's the concentration. The modeled

23 concentration --

24 BY MS. CORDRY:

25 Q Okay.

Page 61

1 A -- is pulled, not the traffic peak.

2 Q Okay. That is not what you've testified to

3 before, though, is it? I mean, have you not testified

4 before that you picked the 175th highest traffic hour? That

5 was on the weekday, because you said all along that the

6 weekday hours were higher than the weekend hours.

7 A I don't recall testifying that we use 175th

8 peak-hour emission. What I testified, when modeling NOx,

9 that we used 175th highest modeled value each year, but

10 that's based upon the emissions, assuming that that peak

11 weekday traffic flow and emission rate happened all the time

12 the station is open --

13 Q Right, but --

14 A -- didn't vary at all.

15 Q But if you have -- well, let me ask you before I

16 go on, where did you get this 23 percent difference?

17 A Mr. Guckert estimated for the southern ring road

18 783 vehicles the peak weekday -- weekend value. Relative to

19 639 that we modeled, that's 23 percent.

20 Q Where did you come up with that particular number

21 from? Where does that, where do those figures come from?

22 A He provided that to us. I don't recall the basis

23 for it.

24 Q Okay. It's not a figure 10 number? Or is it one

25 of these ones where you're picking out numbers from the



1 other one, or I mean, he just gave you that number?

2 A He provided us analysis, but my recollection is it  
3 added up to 783. I don't recall which page of his  
4 documentation that came from.

5 Q Okay, because I don't think we've ever seen that  
6 number as such. It's nowhere -- there is no 783 number for  
7 the southern ring road in Mr. Guckert's, any of his reports.  
8 So I'm trying to --

9 MR. GROSSMAN: Is there a number that's close to  
10 that, or --

11 MS. CORDRY: No. I mean, again, if you use the  
12 numbers at Intersection 16 and Intersection 20, none of them  
13 are like that. We don't, of course, have a number down  
14 there for the gas station with, you know, traffic and so  
15 forth, but -- and I guess, maybe, that's his average. So I  
16 don't know what he's averaging, but you know, I don't know.  
17 We've never seen that 783 number before Mr. Sullivan  
18 mentioned it last week. So I've been trying to determine  
19 where these come from.

20 MR. GROSSMAN: Okay.

21 MS. CORDRY: Okay.

22 BY MS. CORDRY:

23 Q So, so again, I really, I'm very hard-pressed to  
24 try to determine how to compare that 783 or whatever number  
25 it is in the analyses to the other ones. It's clear --

1 okay. We'll come back, I guess, on our own testimony and  
2 put in what the numbers of cars are that were observed by  
3 Dr. Adelman. They're in the record, and we can come back  
4 with that in terms of how much higher they were on the  
5 weekday, going south, than what was projected, but let me,  
6 let me try to think what to ask you at this point. Again --

7 MR. GROSSMAN: Do you want to break?

8 MS. CORDRY: Well, no. I'm just --

9 BY MS. CORDRY:

10 Q To clarify again, my understanding from all your  
11 previous testimony -- and we'll have to go back and pull up  
12 the records -- was that you were saying the, you were  
13 looking at the 175th highest --

14 MR. GROSSMAN: Well, he's answered that question  
15 already.

16 MS. CORDRY: Okay.

17 BY MS. CORDRY:

18 Q Traffic hour --

19 MR. GROSSMAN: He doesn't have to clarify any  
20 further. He's answered that question. He wasn't talking  
21 purely about 175th for his traffic hour; he was talking  
22 about 175th for his modeled hour. So that's what he's  
23 answered --

24 MS. CORDRY: Okay. And --

25 MR. GROSSMAN: -- so let's not go over it another

1 time.

2 MS. CORDRY: Well, I am trying to figure out how  
3 we, how he gets to that, because it seems to me, if you  
4 don't have the traffic numbers, the correct traffic numbers,  
5 it's hard to then get to determining what is the highest  
6 value there, but --

7 MR. GROSSMAN: You can argue that. That's --

8 MS. CORDRY: Well, yes.

9 MR. GROSSMAN: -- that's an argument.

10 MS. CORDRY: All right. We may have to just do  
11 some of that on our own here, but let's see.

12 BY MS. CORDRY:

13 Q Is it your understanding that the 783 was coming  
14 from his observations on that Saturday --

15 A It's based upon --

16 Q -- in April of last year?

17 A It's based upon his analysis of weekend traffic,  
18 Intersection 16, 20, and the gas station intersection.  
19 That's my recollection.

20 Q Okay. Well, was that number deriving from the  
21 actual observations on the weekend, or was it deriving from  
22 those observations with additional background added and  
23 additional gas station traffic added?

24 A My recollection was with a total, total projected  
25 -- you know, totals, not just, is what he, what he

1 determined would be the updated numbers that we should use,  
2 and you know, it came from his report. I don't remember  
3 exactly, again, you know, which figures or tables, but  
4 that's the value that was supporting, which he gave us.

5 Q Okay. Because he was using 639, you were getting  
6 from his numbers, as the solely southern ring road portions  
7 of those intersections on the weekday, as I understand it,  
8 correct, and he's now using -- he's telling you that 783 is  
9 the same kind of set of numbers for the weekend, correct?

10 A That's my recollection.

11 Q Okay. So he's saying the weekend on the southern  
12 ring road would be approximately 23 percent higher than the  
13 weekday?

14 A The peak weekend hour will be 23 percent higher  
15 along the southern ring road than the peak weekday hour --

16 Q Okay. And --

17 A -- traffic flow.

18 Q Okay. All right. So we're going to have to do  
19 some more calculations in terms of -- certainly the  
20 difference at Intersection 16 in total, as we've just said,  
21 was 1899 versus 1467, is more than 23 percent higher?

22 A I don't know. I didn't calculate that number.

23 Q Well, 400-something over 13 is more like about a  
24 third or more higher than --

25 MR. GROSSMAN: Well --

Page 66

1 MS. CORDRY: Okay.  
2 MR. GROSSMAN: -- asking him to do the --  
3 MS. CORDRY: Okay.  
4 MR. GROSSMAN: -- math in his head now is not  
5 fair. So --  
6 MS. CORDRY: All right. Okay. It's -- this is  
7 really interesting. We can never finally discuss that.  
8 BY MS. CORDRY:  
9 Q Okay. All right. In terms of, if we look at  
10 Mr. Guckert's exhibit, or this is actually the OZAH exhibit  
11 over there, 128(b), which is up on the stand right now, you  
12 did hear the questions to Mr. Guckert about his use of the  
13 critical lane volume/level of service display on that chart  
14 where it was showing level of service A at each  
15 intersection?  
16 A I don't, I don't recall the service level  
17 discussion. I mean, I don't, just don't recall it.  
18 Q Okay. Well, did you sit through the last three  
19 days of Mr. Guckert's testimony?  
20 A I was there for at least two of them, but I don't  
21 know, recall if it's three, but I heard a lot of his  
22 testimony, but --  
23 Q Okay.  
24 A -- that particular portion I don't, just don't  
25 recall it very clearly.

Page 67

1 Q Okay. So you don't recall anything about the  
2 level of service issues in the case?  
3 A I remember him discussing that topic, but where it  
4 didn't pertain directly to my analysis, I don't, I didn't  
5 take a lot of notes or anything on that.  
6 Q Well, part of your analysis would have to do with  
7 how fast cars were moving through these intersections and  
8 around the ring road, isn't that true?  
9 A We made assumptions about traffic speeds.  
10 Q Okay. And assumptions of how long cars would be  
11 lined up, queuing at different points around either on the  
12 ring road or out on the main road?  
13 A We got estimates of queue, queue lengths, yes, for  
14 each intersection.  
15 Q Okay. And the queue lengths you were estimating  
16 were out on the main roads, is that correct?  
17 A Each intersection except the gas station  
18 intersection is my recollection.  
19 Q I'm sorry. Say that again, please.  
20 A Each intersection that had a, that had a signal,  
21 whatever, we had a, we would have a queue for it. We  
22 wouldn't have one for the intersection because there's no,  
23 there's no gas -- there's no light or anything, reason for  
24 us to have an intersection there.  
25 Q Okay. So the one you're saying you didn't have

Page 68

1 any queue for, you're talking about the gas station  
2 intersection down on the bottom of the ring road there?  
3 A That's correct.  
4 Q Okay. And you've been talking about signals,  
5 which are out on the main road, correct?  
6 A Again, my recollection is, where there were  
7 intersections that would have queues because of lighting,  
8 because of traffic lights, we would have a queue established  
9 in the modeling.  
10 Q Okay. Yes. As I recall, it was like an 18-car  
11 queue you were showing on various of the main roads out  
12 around the mall?  
13 A It varied.  
14 Q Okay. Did you show queues on entrances to the  
15 ring road?  
16 A You have to look at the -- we'd both have to look  
17 at the modeling files together to look at where the queues  
18 are, but again, if you want to research that, the queues  
19 are, are referred to as Area Source 1, Area 2, and so forth  
20 in the modeling files. It shows exactly where those queues  
21 were, and the emission rates are shown on the spreadsheets.  
22 I mean, it's all there. I just don't recall each one.  
23 Q Okay. Do you recall whether you were assuming  
24 queuing at the intersections within the mall?  
25 A My -- I think I've answered that question a couple

Page 69

1 of times.  
2 Q Well, could you answer it again, please?  
3 A My recollection is that if there was a light and  
4 we knew the traffic volumes and the light sequencing, that  
5 we would have had a queue established for there --  
6 Q Okay.  
7 A -- but that's my, that's my recollection. To know  
8 for sure, again, I refer you to the modeling data disk.  
9 Q Okay.  
10 MR. GROSSMAN: But if it was a stop sign, is your  
11 recollection that there wouldn't be any queuing?  
12 THE WITNESS: I just don't recall.  
13 MR. GROSSMAN: Okay.  
14 BY MS. CORDRY:  
15 Q All right. So we all agree that there are not  
16 stop signs at Intersection 16 or, I'm sorry, that there are  
17 not stoplights at Intersection 16 or at Intersection 20?  
18 A I say again, I just don't recall each  
19 intersection, the light versus the stop sign or which ones  
20 had queues and which ones did not.  
21 Q Okay. Do you recall getting any information from  
22 Mr. Guckert or looking at any chart similar to this in April  
23 that indicated to you that there -- that as he has  
24 testified, that his levels of service A there were meant to  
25 indicate there was little or no delay at any spot around the

Page 70

1 mall?  
2 A I don't recall.  
3 Q Do you recall discussing with him any questions  
4 about congestion or queuing or idling at any spot within the  
5 mall after the warehouse opened?  
6 A I just don't recall.  
7 Q Are you aware that there is substantial evidence  
8 that there is in fact queuing, long lines of queues of cars  
9 oftentimes on the weekend going up to Intersection 16?  
10 A I don't recall that testimony.  
11 Q You don't have any idea that any of that testimony  
12 has come into the record here about that?  
13 A I just answered you.  
14 Q Okay. Were you here during Mr. Guckert's  
15 testimony when we were going over the videos and the fact  
16 that cars were shown backed up all the way down from  
17 Intersection 16 --  
18 MR. GOECKE: I object.  
19 BY MS. CORDRY:  
20 Q -- University Boulevard?  
21 MR. GOECKE: I object. What relevance does it  
22 have about what he recalls about the testimony or not?  
23 MR. GROSSMAN: Well --  
24 MR. SILVERMAN: The question is what he knows.  
25 MR. GROSSMAN: Well, I think it's repetitive and

Page 71

1 objectionable on that basis because he's already answered he  
2 doesn't recall, but I'll let him answer that one additional  
3 question about that. Do you recall?  
4 BY MS. CORDRY:  
5 Q Do you recall being here while we were showing  
6 videos, for instance, discussing and showing how cars were  
7 backed up all the way from Intersection 16 down to the  
8 University Boulevard intersection?  
9 A I recall seeing a video for a particular snapshot  
10 in time. I don't recall the context for that video, but I  
11 recall the video showing backup.  
12 Q Okay. And if there are in fact 20, 30, 40 cars  
13 lined up at Intersection 16, going through at a couple miles  
14 an hour and not free-flow traffic, does that affect your  
15 analysis?  
16 A Theoretically, yes, that would affect our  
17 analysis, but just to, maybe to put context to this whole  
18 line of questioning -- one reason in our report we show, we  
19 break down the culpability; we show how much the impacts are  
20 coming from, you know, the ring road, the gas station, other  
21 roadways -- I'd suggest if you look at the other roadways  
22 and look for context, you'd find that, generally, the  
23 contribution from those is very small.  
24 So, you know, you could take Intersection 16 and  
25 University and the rest and substantially increase those; it

Page 72

1 has a minor effect on the results. The southern ring road,  
2 gas station operations, in some cases the warehouse, these  
3 are the more significant sources, but the roadways, in  
4 general, are not a big contributor to the modeled  
5 concentrations.  
6 Q Okay. Well, I'm not talking about the roadways  
7 outside the mall. I'm talking about coming into the ring  
8 road. I'm talking about backing up at the ring road  
9 intersections.  
10 A They're included in the analysis. When I say  
11 other roadways, it's other than the southern ring road.  
12 Q Okay.  
13 A So they're in there --  
14 Q Okay.  
15 A -- as in that category, and they can be reviewed  
16 from our most recent rebuttal report. You can see what the  
17 contributions are.  
18 Q And are you aware that there's substantial  
19 testimony that cars backup from Intersection 16 south and  
20 line up there oftentimes on the weekend and have long lines  
21 of queuing delay going out and that's on the southern ring  
22 road? Are you aware of that?  
23 A I don't recall that testimony, and again, I don't  
24 know the context for what you're saying. So I just don't  
25 know. I can't answer your question.

Page 73

1 Q So assuming there is that kind of testimony and  
2 that there are such queues, does that have an effect on your  
3 analysis?  
4 A You're saying if the southern ring road backs up?  
5 Q In other words, if, coming from Intersection 16,  
6 if there are cars backing south here, past the entrance of  
7 Target, all the way down at times to the entrance, the main  
8 east-west drive aisle and beyond, are those cars backing up?  
9 They're on the southern ring road, correct, in terms of what  
10 you're defining as southern ring road?  
11 A Where's Intersection 16 here?  
12 Q See where this A is right here? That's basically  
13 Intersection 16.  
14 A It depends. In other words --  
15 Q What?  
16 A -- you're asking me, if they back up in here, is  
17 that going to have, like, an effect?  
18 Q Yes.  
19 A It depends how far they back up.  
20 Q Well, if they back up past the Target, back up all  
21 the way down to the east-west drive aisle, perhaps even  
22 further than that on occasion.  
23 A I mean, it's a hypothetical. I have no idea if  
24 that ever happens, but if it does, if you want to look -- if  
25 you want to put it in context, look at the rebuttal report

1 2014 and look at the ring road and look at the contribution  
2 to ring road now and you can make some judgments based upon  
3 that, its culpability relative to the overall impacts, and  
4 what I'm saying is you could make substantial increases in  
5 that number without significantly affecting the bottom line.

6 Q Well, of course, we're not the experts; so we're  
7 not really the ones who can make these -- if you did a Monte  
8 Carlo analysis, that would be the sort of thing that you  
9 might put into your varying kinds of assumptions, isn't it?

10 A You certainly could do a Monte Carlo analysis.  
11 I'm not recommending that it be done for this matter here,  
12 but if you did, that could be put in, sure, but you also put  
13 in frequency. So you could say, well, the ring road backs  
14 up down to Target sometimes; maybe it happens twice a year,  
15 so that you could put that into the Monte Carlo, and most of  
16 the time, maybe, maybe 98 percent of the time it doesn't  
17 back up at all. So my point is, yes, you can in a Monte  
18 Carlo, but this is not the context to conduct a Monte Carlo  
19 analysis.

20 Q Okay. But you don't actually know how often it  
21 backs up because nobody's actually gone out there and tried  
22 to figure that out, have you?

23 A I'm saying I don't recall hearing testimony. I  
24 don't, I don't know the backup history on that road.

25 Q Okay. And if I proffer to you, as an expert,

1 again, as a hypothetical, that there are, in fact,  
2 frequently backups on that road on the weekend, that is  
3 something that could affect your analysis, correct?

4 MR. GOECKE: Well, you're proffering as an expert?

5 MS. CORDRY: No. I am proffering --

6 MR. SILVERMAN: No, to an expert.

7 MS. CORDRY: -- as someone who put that testimony  
8 in and as those -- I am asking him, as an expert, with that  
9 -- it's not a hypothetical because the evidence is in the  
10 record -- but with that evidence in the record.

11 MR. GROSSMAN: The as an expert was referring to  
12 him --

13 MS. CORDRY: Yes.

14 MR. GOECKE: Okay.

15 MS. ADELMAN: Yes.

16 MR. GROSSMAN: -- not to Ms. Cordry.

17 MR. GOECKE: And where in the record is this?

18 MS. CORDRY: It's in our, my testimony. It's in  
19 pictures. There are videos showing the cars backing up past  
20 the --

21 MR. GROSSMAN: But I think he's already answered  
22 this question. He has said it could have some impact but it  
23 could be insignificant depending on how frequent it is and  
24 where it is.

25 MS. CORDRY: Right, but --

1 MR. GROSSMAN: So he's already answered this  
2 question. So --

3 MS. CORDRY: Okay. So, but I'm trying to get --  
4 okay. It is a question as to whether or not he's looked  
5 into any of these possibilities beyond assuming that there  
6 is not delay on those roads, and that's what I'm trying to  
7 get at, is does his analysis include any consideration of  
8 delay on those roads.

9 THE WITNESS: I think the best, the best answer,  
10 Ms. Cordry, is that if you consider the analysis we did in  
11 full context, using a peak 639 cars all the time -- it's the  
12 intersection of adverse meteorology and peak emissions that  
13 creates high concentrations in the air -- by keeping that  
14 number high all the time, 18 hours a day, seven days a week,  
15 we're much more than compensating for some factor like  
16 you're referring to right now. There's a tremendous amount  
17 of conservatism embedded in that analysis.

18 BY MS. CORDRY:

19 Q And that applies primarily to the longer time  
20 periods, correct? When you're talking about a one-hour time  
21 period, the peak-hour and the one-hour time period, they  
22 coincide, do they not?

23 A It applies to all of them. The issue is, if we're  
24 linking 639 cars -- that's a lot of cars -- all the time,  
25 including 7:00 in the morning and 9:00 at night when you can

1 have much more adverse dilution conditions, that's going to  
2 give you more hits of the higher numbers, and in fact,  
3 they're artificial because you don't have 639 cars at 7  
4 o'clock in the morning. That's in the analysis. You can  
5 look at the modeling files, and you'll see it's there.

6 So we purposely did these analysis with  
7 conservatism to address issues like this and then present a  
8 culpability so you could pull it out and see what if, what  
9 if I doubled the roads, what if I doubled the ring road,  
10 what does that do, and you can look at the analysis in the  
11 February 2014 report and see what it does.

12 Q Okay. And I'm trying to get at the various  
13 factors that go into this and whether or not you considered  
14 any of them and whether or not you put any of them into your  
15 report in terms of uncertainty, range of figures, and so  
16 forth.

17 A Well, my response is, we, by the approach that was  
18 taken, including what I just mentioned, we have allowed a  
19 sufficient degree of conservatism to anticipate issues like  
20 this: what if sometimes the cars are going slower in the  
21 parking lot; you know, what if it backs up at Intersection  
22 16? We can't address all those in a practical modeling  
23 analysis, just impractical, but by having the conservatism,  
24 such as using the peak hour all the time inside the mall, we  
25 have anticipated that line of question and have tried to do

1 our best to make it conservative.

2 Q By using the peak hour for non-peak hours, does  
3 that change the level of emissions for the peak hour itself?  
4 When we're looking at one-hour issues, does that somehow  
5 change the level of emissions at the peak hour if you were  
6 assuming that it may be higher some other, completely other  
7 different hour?

8 A Well, there's two, there's two factors here. You  
9 have emissions and you have modeled concentrations. It very  
10 much changes the model concentration distribution to assume  
11 peak emissions happen all the time when they don't. So that  
12 the bottom line here is air concentration, not emissions --

13 Q And that's --

14 A -- you have to put the whole package together to  
15 answer your question.

16 Q So in terms of, for instance, if people are -- if  
17 cars are moving, you were assuming at least seven-and-a-half  
18 miles through the parking lot and that it would take no more  
19 than two minutes or so, two-and-a-half minutes to get in and  
20 get a parking space. If in fact people have to drive slower  
21 than that because cars are, pedestrians are in the path,  
22 because they have to wait for them, because there's backups,  
23 all of that is taken in by your conservatism, you're saying?

24 A Well, did you say seven-and-a-half miles an hour?

25 Q Yes.

1 A My recollection is five.

2 Q I think you said seven-and-a-half, I believe, in  
3 your --

4 A The modeling shows five. So the issue is -- well,  
5 I've made this point before -- go into a parking lot and try  
6 to drive five miles an hour; you're not going to do it  
7 unless, if for some reason that queue you're going down, the  
8 lane you're going down in the parking lot is, people are  
9 stopped. If you're driving your car -- and try to drive a  
10 car five miles an hour some time; it's really hard to do.  
11 We're being conservative by doing that. Could it be that  
12 some time near Target people slow down? Sure. We're  
13 modeling a whole parking lot. What are the odds that  
14 everybody in the parking lot typically are going three miles  
15 an hour, which is walking speed? It's remote.

16 Q Well, how about if, in fact, people are walking up  
17 and down the drive aisle all the time so that most of the  
18 time you are going at the same speed as the pedestrians  
19 because they're in your way?

20 A I don't accept that premise. An average person  
21 driving his car, leaving the ring road, and his transit back  
22 and forth in the parking lots, I would be -- if you would  
23 measure that, which Mr. Guckert has, it's on the order of  
24 five miles an hour and less. So looking at the big picture,  
25 the whole parking lot, I'll stand behind five miles an hour

1 as being a, is a very conservative treatment and to be, to  
2 model less than that would be unrealistic.

3 Q Okay. So if you previously testified you were  
4 looking at seven-and-a-half miles an hour, that's -- you're  
5 not saying seven-and-a-half; you're saying your modeling  
6 actually uses five?

7 A We used, my recollection is, used five. I don't  
8 recall. I won't say -- if it's in the record, I'll correct  
9 it, but the modeling files show what we used in the modeling  
10 assumptions and reports, and my recollection, it was five  
11 miles an hour in the parking lots --

12 Q Okay. Because I pretty --

13 A -- 15 miles an hour on the ring road.

14 Q Okay. Because I remember this discussion. What I  
15 remember, seven-and-a-half miles you couldn't stay down to.  
16 In terms of the garage, you indicated you thought you were  
17 being, again, you were being conservative when you had,  
18 like, five minutes for people to come in and exit from the  
19 garage?

20 A That's correct.

21 Q That was on the assumption, was it not, that at  
22 the time, that Mr. Guckert was and the studies were showing  
23 that the garage was not very heavily used at that point?

24 A The, I don't -- that didn't enter into our  
25 evaluation of the timing, going in and out of that garage.

1 We made a, what we felt and still feel, is a conservative  
2 estimate: two-and-a-half minutes to leave the ring road,  
3 get to your parking place in the parking garage, park, then  
4 two-and-a-half minutes to egress.

5 Q Okay. So that if, in fact, the garage is mostly  
6 full and you have to drive up and down aisle and aisle and  
7 aisle, you're sure that's still, you can do all of that in  
8 two-and-a-half minutes?

9 A Repeat that question.

10 Q I said, if the garage these days is primarily full  
11 most of the time and people, when they come into the garage,  
12 have to drive up and down the aisles looking for a space,  
13 you're sure that they can always usually get in there within  
14 two-and-a-half minutes?

15 A You said always usually.

16 MR. GROSSMAN: Yes. I mean, you've --

17 MS. CORDRY: Okay.

18 BY MS. CORDRY:

19 Q That you can usually get in there within  
20 two-and-a-half minutes.

21 A Usually, yes. Always? I'm sure there's a time  
22 when it'll take more than two-and-a-half minutes.

23 Q And I think your diagram, I believe, showed people  
24 going up and down, like, one aisle or up one aisle and down  
25 one aisle as your assumed traffic distance that they were

1 going to travel.

2 A We used that as a midpoint estimate, yes.

3 Q Okay. So if people, in fact, have to drive up  
4 three or four aisles, that would extend the time and the  
5 amount of -- okay.

6 MR. GROSSMAN: Really, I mean, in terms of the  
7 pollution analysis, do you -- just, it's a very, very minor  
8 technical --

9 MS. CORDRY: Okay.

10 BY MS. CORDRY:

11 Q You also stated with respect to trucks that you  
12 were being conservative in your most recent analysis because  
13 you assume 72 heavy-duty trucks are going to come to the  
14 store rather than 10 that Costco states as its usual volume,  
15 is that correct?

16 A Correct.

17 Q Is it actually another way of stating this that  
18 you're assuming that there's a certain total amount of  
19 idling of these heavy-duty trucks going on, i.e., 72 trucks  
20 times 10 minutes an hour?

21 A To be exact, we're assuming 18 hours a day, when  
22 trucks do deliveries at Costco warehouse, that each of the  
23 four bays is always filled by a heavy-duty diesel vehicle  
24 and each of those vehicles idles for 10 minutes, which would  
25 total, 18 times four would be 72 hypothetical --

1 Q Times 10 trucks, so --

2 A -- HDDVs.

3 Q -- so 720 minutes', total minutes' worth of  
4 idling?

5 A Correct.

6 Q Okay. And you're assuming it only idles 10  
7 minutes because that's Costco's policy?

8 A The modeling is based upon a 10-minute idle time.

9 Q Okay. So if a given truck idles longer than 10  
10 minutes, if it idles 20 minutes, that's roughly the same  
11 equivalent of having two trucks idling 10 minutes each,  
12 correct, for your modeling purposes?

13 A Well, where is, where is, where are the two trucks  
14 located that are idling for 20 minutes?

15 Q Let me just start with that basic point, that if a  
16 truck sits there at the dock, let's say, and idles for 20  
17 minutes, that would be the same as two trucks idling for 10  
18 minutes in your modeling?

19 A Approximately the same.

20 Q Okay. Are you aware of testimony that has come in  
21 the record that trucks often idle in and about the loading  
22 docks for more than 10 minutes at a time?

23 A I don't recall hearing that testimony.

24 Q Okay. Well, I'm sure you weren't here for all of  
25 the testimony, but are you aware that that -- that there is

1 testimony to that effect?

2 A I would not be surprised at some times vehicles  
3 idle more than 10 minutes and sometimes less than 10  
4 minutes.

5 Q So in terms of the modeling you were doing, if  
6 there are trucks idling overall more than 720 minutes a day,  
7 whether it's one truck or 72 trucks, then that's what your  
8 modeling says. Once it goes past 720 minutes' total idling,  
9 then you're already beyond what your modeling is assuming?

10 A Well, the modeling is assuming -- the modeling in  
11 the most recent report is going to change, made how we're  
12 modeling the warehouse more conservative. We understand  
13 that sometimes, infrequently, there could be a heavy-duty  
14 vehicle that's not clean diesel.

15 We assumed a fleet average this time. We didn't  
16 use a clean-diesel assumption only. We put a fleet mix, a  
17 standard fleet mix for this time. So, in that sense, where  
18 almost all of those vehicles will be clean diesel, we are  
19 substantially overstating the emissions that are actually  
20 going to occur there much more than if one vehicle happens  
21 to idle beyond Costco's policy. So, again, there's embedded  
22 conservatism that errs on the side of overstatement rather  
23 than understatement.

24 Q Okay. And last summer you were assuming 10 trucks  
25 idling 96 minutes each. So it was a total of 960 minutes?

1 A It's the same assumption as last time in terms of  
2 how many vehicles are in the loading docks. We still had  
3 the same number. The issue is then we did use a  
4 clean-diesel assumption for all of them, this time used the  
5 fleet mix --

6 Q Okay.

7 A -- for all of them, which included a small  
8 fraction of clean diesel, but most, most of them would be  
9 standard heavy-duty vehicles.

10 Q And I think you were also stating that you were  
11 assuming that only heavy-duty trucks could be idling at the  
12 loading dock, that you didn't have any light-duty trucks  
13 there because the loading dock bays were filled up?

14 A Which averaging time and pollutant you're  
15 referring to?

16 Q Well, I'm just referring to, you stated that, as I  
17 understand in your report, you said that you weren't using  
18 light-duty vehicles because the loading docks, you were  
19 assuming, were filled with heavy-duty trucks idling.

20 A We said that for one-hour assumptions to be  
21 conservative, because heavy-duty trucks emit more than  
22 light-duty trucks. We assumed all the bays were filled with  
23 heavy-duty vehicles for one and eight hours. For 24 and  
24 annual average, we assumed 10 of each.

25 Q Okay. And are you aware that at times, when the

Page 86

1 heavy-duty trucks are at the loading docks, that light-duty  
2 vehicles come and park in front of the heavy-duty vehicles?  
3 A I'm not aware of that.  
4 Q Well, are you aware that they often park in the  
5 drive aisles while heavy-duty trucks are in the loading  
6 dock?  
7 A I have no opinion on that.  
8 Q Or in the overall parking area -- are you aware of  
9 any of that testimony that was put in the record before?  
10 A What in the overall parking area?  
11 Q In the parking area directly across from the  
12 loading dock, where the gas station would now be.  
13 A Well, I'm not sure what your question is about.  
14 Please rephrase.  
15 Q Okay. Are you aware that there's been testimony  
16 and exhibits submitted that indicate that light-duty trucks  
17 park in those areas as well, even if the loading docks are  
18 full?  
19 A Are you referring to light-duty vehicles going to  
20 Costco, Target, the general mall --  
21 Q Light-duty trucks, I'm sorry.  
22 A -- where are they parking? I'm not understanding.  
23 Q Light-duty delivery trucks, I'm sorry. Let me be  
24 clear.  
25 A For Costco?

Page 87

1 Q Yes.  
2 A My understanding was light-duty delivery trucks  
3 generally go to the warehouse and go into a, into a bay. I  
4 don't --  
5 Q I'm sorry. I'm sorry, go into? I'm sorry. I  
6 just --  
7 A -- have information that shows anything different  
8 than that.  
9 MR. GROSSMAN: Go into a bay.  
10 MS. CORDRY: Go into a bay. Okay.  
11 BY MS. CORDRY:  
12 Q And are you aware that if the bays are full, that  
13 trucks still come there and park and make deliveries; they  
14 park in front of the heavy-duty trucks?  
15 A I don't have any information on that.  
16 Q Okay. So that could affect how much idling is  
17 going on if those trucks are still coming, even though they  
18 don't have a spot in the bay?  
19 A It depends.  
20 MS. CORDRY: Can I take just a moment?  
21 MR. GROSSMAN: Sure.  
22 MS. CORDRY: Actually, can we take, like, a  
23 couple-minute break, and I'll see if I'm done with this  
24 segment?  
25 MR. GROSSMAN: Okay. Are you saying that you

Page 88

1 think you might be done with your portion of the  
2 cross-examination?  
3 MS. CORDRY: There's another segment of questions,  
4 but I think I'm just about done with the traffic piece here.  
5 I just want to --  
6 MR. GROSSMAN: Okay. How long do you think your  
7 other segment will take?  
8 MS. CORDRY: Probably about the same amount of  
9 time.  
10 MR. GROSSMAN: All right. All right. So let's  
11 take a five-minute break until 11:20.  
12 MS. CORDRY: And I'll also check with  
13 Ms. Rosenfeld. She said I could text her and see whether  
14 she was on her way.  
15 MR. GROSSMAN: All right. Thank you.  
16 (Whereupon, a brief recess was taken.)  
17 MR. GOECKE: I handed out copies of the list.  
18 You've got one right in front of you there.  
19 MR. GROSSMAN: Oh, okay, the revised list.  
20 MR. GOECKE: Yes.  
21 MR. GROSSMAN: Let's exhibitize it, and we'll call  
22 it Exhibit 563, and it's Applicant's revised objection, or  
23 let's say, revised list of objections to exhibits.  
24 (Exhibit No. 563 was marked  
25 for identification.)

Page 89

1 MR. GOECKE: And we added a column to this chart,  
2 Mr. Grossman, of Exhibit Description in the middle, just so  
3 everyone knows what exactly we're talking about, just to --  
4 MR. GROSSMAN: Right.  
5 MR. GOECKE: -- help facilitate the discussion.  
6 MR. GROSSMAN: Okay. All right. And as time  
7 permits, then we'll, and after the opposition has had an  
8 opportunity to go over it, we'll then deal with them --  
9 MR. GOECKE: Whenever you want.  
10 MR. GROSSMAN: -- one at a time.  
11 MS. CORDRY: All right. Are we on the record?  
12 MR. GROSSMAN: We're on the record, yes. We have  
13 been.  
14 MS. CORDRY: Okay. All right. I think we're done  
15 with the traffic questions. I'm going to move on to some  
16 questions about background levels.  
17 MR. GROSSMAN: Okay.  
18 MS. CORDRY: And let me go ahead, we might as well  
19 go ahead and mark these new exhibits that we talked about  
20 that were the charts.  
21 MR. GROSSMAN: Okay. Mr. Goecke, do you happen to  
22 have an extra copy of your exhibit --  
23 MR. GOECKE: Yes.  
24 MR. GROSSMAN: -- objection list? And would you  
25 also make sure to e-mail me a copy --

Page 90

1 MR. GOECKE: Sure.  
2 MR. GROSSMAN: -- so I have it in my electronic  
3 record?  
4 MS. ADELMAN: Have they been e-mailed out,  
5 Mr. Goecke?  
6 MR. GOECKE: They have not.  
7 MS. ADELMAN: No.  
8 MR. GROSSMAN: Thank you.  
9 MS. ADELMAN: Are you --  
10 MR. GOECKE: Would you like a copy? Did you get  
11 one?  
12 MS. ADELMAN: Yes, I'd like to -- if you have an  
13 extra, that would be great.  
14 MR. GOECKE: Yes, of course.  
15 MS. ADELMAN: Okay. Thank you.  
16 MR. GOECKE: Sorry.  
17 MS. ADELMAN: Thank you.  
18 MR. GROSSMAN: Thank you. Okay. All right.  
19 MS. CORDRY: All right. So go ahead and just  
20 describe these so we can mark them or whatever. The  
21 first --  
22 MR. GROSSMAN: So do you have an order in which  
23 you want to mark these?  
24 MS. CORDRY: Yes. The first one would be the  
25 PM2.5 air monitor readings.

Page 91

1 MR. GROSSMAN: Okay. So we'll make that -- do you  
2 want this all as a, like, 564(a), (b), (c), (d), or do you  
3 want them as separate numbers, or do you have a preference?  
4 MS. CORDRY: They can be (a), (b), (c), I guess.  
5 MR. GROSSMAN: Okay. All right. So 564(a) --  
6 MS. HARRIS: That's the PM2.5?  
7 MS. CORDRY: Right.  
8 MS. ADELMAN: This is what, Mr. Grossman, please?  
9 MR. GROSSMAN: This is 564(a) --  
10 MS. CORDRY: And it's the one-page PM --  
11 MR. GROSSMAN: -- and that's PM2.5 Air Monitor  
12 Readings.  
13 (Exhibit No. 564(a) was marked  
14 for identification.)  
15 MS. CORDRY: And the second one, which would be  
16 564(b), would be the NO2 pieces. There's a one-page,  
17 labeled NO2 Values-Yearly and Running Averages, and then a  
18 three-page, I think it's three pages, yes, three-page backup  
19 of that, which is the yearly values. So that would all  
20 be --  
21 MR. GROSSMAN: Okay. So the first one is NO2  
22 Values-Yearly and Running Averages and Micrograms Per Cubic  
23 Meter, and then the second one is entitled NO2 Values from  
24 Nearby Monitors, 2009 to 2012 --  
25 MS. CORDRY: Yes.

Page 92

1 MR. GROSSMAN: -- is that what you're talking  
2 about?  
3 MS. CORDRY: Right.  
4 MR. GROSSMAN: Okay. So (b) would be, 564(b)  
5 would be NO2 Values-Yearly Running Averages, or Yearly and  
6 Running Averages --  
7 MS. HARRIS: Is this the one that says, NO2 Values  
8 from Nearby Monitors --  
9 MS. CORDRY: Yes. Yes.  
10 MS. HARRIS: -- 2009 to --  
11 MR. GOECKE: That's (c).  
12 MS. HARRIS: -- 2012?  
13 MS. CORDRY: Well, that would all be part of (b).  
14 These are all of the NO2 values. So --  
15 MR. GROSSMAN: No. Wait a minute. Just so we --  
16 MS. CORDRY: There should be a separate single  
17 page for the --  
18 MR. GROSSMAN: Yes. The single page labeled NO2  
19 Values-Yearly and Running Averages, parens, Micrograms Per  
20 Cubic Meter, that is 564(b).  
21 (Exhibit No. 564(b) was marked  
22 for identification.)  
23 THE WITNESS: (D), like in David?  
24 MR. GROSSMAN: (B), as in boy.  
25 THE WITNESS: Thank you.

Page 93

1 MS. HARRIS: I don't think we have that one.  
2 MS. CORDRY: There were two tabs on what was sent  
3 over.  
4 MS. HARRIS: Do you have an extra copy by chance?  
5 MS. CORDRY: Let me see what we got here. I can  
6 make some more copies at the next break, but here is the one  
7 page --  
8 MR. GOECKE: Thank you.  
9 MS. CORDRY: -- that goes with the two-page.  
10 MR. GROSSMAN: And the next one you want is --  
11 MS. CORDRY: Is the CO monitor values.  
12 MR. GROSSMAN: Oh, no. Wait a minute. Wait a  
13 minute. I thought you wanted me to do the NO2 Values from  
14 Nearby Monitors, 2009 to 2012.  
15 MS. CORDRY: Well, I want that all -- that would  
16 all be part of 564(b).  
17 MR. GROSSMAN: Yes. Oh, well, no. That's  
18 separately stapled.  
19 MS. CORDRY: Okay. It's fine. I just didn't have  
20 -- I ran out of staples at home to staple all of those  
21 together.  
22 MR. GROSSMAN: Okay.  
23 MS. ADELMAN: Is it going to be (c) or (b)?  
24 MR. GROSSMAN: This will be (c) --  
25 MS. CORDRY: Okay.



Page 94

1 MR. GROSSMAN: -- is NO2 Values from Nearby --  
2 MS. CORDRY: And to correct the title on that, it  
3 actually, it now runs through 2013. I didn't update the  
4 title on that. I'm sorry.  
5 MR. GROSSMAN: -- Monitors, 2009 to 2013, and I'll  
6 make the correction on the title.  
7 (Exhibit No. 564(c) was marked  
8 for identification.)  
9 MS. CORDRY: Okay. The final one, which, I guess,  
10 would be 564(d) --  
11 MR. GROSSMAN: Hold it. Hold it. Hold it.  
12 MS. CORDRY: Oh, I'm sorry. I'm sorry.  
13 MR. GROSSMAN: Got to write these things down in a  
14 number of different places. All right. Then we have CO  
15 Monitor Values?  
16 MS. CORDRY: Right.  
17 MR. GROSSMAN: And that's 564(d)?  
18 MS. CORDRY: Yes.  
19 MR. GROSSMAN: That's (d), as in David --  
20 MS. CORDRY: And the --  
21 MR. GROSSMAN: -- CO Monitor Values. All right.  
22 Then I have one more, a single page here.  
23 (Exhibit No. 564(d) was marked  
24 for identification.)  
25 MS. CORDRY: Right, and this is an excerpt from a

Page 95

1 previous exhibit, which I have not been able to determine  
2 which exhibit this was. Let me -- if I can borrow from  
3 Mr. Goecke a moment. It's a very big, long exhibit that we  
4 submitted last summer by Mr. Sullivan. It has several tabs  
5 on it. I'm going to try to figure out between now, at some  
6 point, what this exhibit was, but I've only copied just  
7 basically one page from it. I'm going to ask one question  
8 from it, but I just wanted to let you see it.  
9 MR. GROSSMAN: All right. I don't recognize it  
10 off the top of my head --  
11 MS. CORDRY: Right.  
12 MR. GROSSMAN: -- so let's just give this a new  
13 exhibit number.  
14 MS. CORDRY: All right. All right.  
15 MR. GROSSMAN: And we'll call it 564(e), as in  
16 Edward.  
17 MS. CORDRY: Okay.  
18 MR. GROSSMAN: And this is Daily Mean PM2.5  
19 Concentration. Okay. All right. Ready to proceed.  
20 (Exhibit No. 564(e) was marked  
21 for identification.)  
22 BY MS. CORDRY:  
23 Q And this is just an excerpt from the document  
24 that's already in. So -- all right. Last week you  
25 indicated you had some disagreements with some of the things

Page 96

1 that were in the memo that I prepared about background  
2 levels. So I wanted to go over the background issues and  
3 see where we're actually in dispute and where we are on the  
4 same page with everything. If we start with the document I  
5 just handed you, which is some excerpts from your January  
6 report, do you recognize those pages there?  
7 A Do you have the whole report? I rather not -- I  
8 rather have the whole report to answer questions.  
9 Q Well, do you have your whole report? I do have  
10 it. I didn't make a, you know, I didn't make a number of  
11 copies of your entire report.  
12 A I don't know if I do or not.  
13 MR. GROSSMAN: If you don't, I'm sure we can dig  
14 it out of our files here.  
15 THE WITNESS: I don't have that report with me.  
16 MR. GOECKE: Which report?  
17 MR. GROSSMAN: The January 2012 supplemental --  
18 MS. CORDRY: And it's labeled 2012. It's actually  
19 the 2013 report when you look at the front page and you --  
20 yes.  
21 MR. GROSSMAN: Oh, yes, it's labeled 2012 but  
22 2013.  
23 MS. HARRIS: What exhibit is it, and I can try to  
24 take it out?  
25 MS. CORDRY: It's 56(a).

Page 97

1 MR. GROSSMAN: (A) or (e).  
2 MS. CORDRY: It has (a), I believe, written on the  
3 front.  
4 MR. GROSSMAN: Okay.  
5 MR. GOECKE: I've got it, Pat.  
6 MR. GROSSMAN: Yes.  
7 MS. CORDRY: Yes.  
8 MR. GROSSMAN: (A). By the way, Ms. Cordry, you  
9 actually gave me two copies of that.  
10 MS. CORDRY: Ah, okay. That's where my other copy  
11 is. All right. Is that -- okay. That's actually, I  
12 believe, another page to that.  
13 MR. GROSSMAN: Is it a different page?  
14 MS. CORDRY: I believe so. I have to check and  
15 see.  
16 MR. GROSSMAN: I know there's a page 2 in here.  
17 MS. CORDRY: No? All right.  
18 MR. GROSSMAN: No. It looks like the same one.  
19 MS. CORDRY: Right. Right. There is another page  
20 needed. I will make sure you have it.  
21 MR. GROSSMAN: All right. You also gave me pages  
22 20 and 21 too.  
23 MS. CORDRY: Okay. So that's, those are the other  
24 two pages I was talking about.  
25 MR. GROSSMAN: Okay.

Page 98

1 MS. CORDRY: All right.  
2 BY MS. CORDRY:  
3 Q So, again, do you recognize those pages I gave  
4 you, the excerpt pages?  
5 A I, yeah, I have the report open.  
6 Q Okay. All right. You would agree that in this  
7 report -- let me back up. This was the final version of  
8 your report that you gave to Park and Planning before they  
9 made their recommendations on the application?  
10 A I believe that's correct.  
11 Q Okay. And in that report you agree that you, do  
12 you not, that you stated that in terms of concentrations,  
13 that you were using, quote, the highest measured  
14 concentration measured in Montgomery County and surrounding  
15 areas, as necessary, for the most recent available three  
16 years, i.e., 2009 to 2011? Is that correct?  
17 A Sounds correct.  
18 Q Okay. And you also stated at that time, your  
19 initial analysis that you did, that you stated that you did  
20 that -- and this is on page 17 -- that, quote, EPA and MDE  
21 and all other regulatory agencies in the United States rely  
22 on conservative background methods to maintain a tractable  
23 analysis when evaluating new or modified facilities?  
24 A That's on page 17?  
25 Q Yes. And do you agree with that statement? You

Page 99

1 wrote it, and you agree with it, I assume?  
2 A That certainly is generally true, but of course,  
3 MDE and EPA allow for less conservative treatments on model  
4 applications --  
5 Q Well, I understand. I'm just asking you --  
6 A -- on a case-by-case basis.  
7 Q -- at the moment, Mr. Sullivan, did you make that  
8 statement?  
9 A I'm saying -- I've answered your question.  
10 Q Did you make the statement?  
11 A I'm trying to find the exact quote in the  
12 document. I'm not seeing it.  
13 Q Okay. It is the end of the paragraph at the top  
14 of the page there.  
15 A Adding the conservative background concentration  
16 of values, as described above, to the total modeled  
17 concentrations produce airborne concentrations that would be  
18 expected to be significantly higher than what would be  
19 computed if all sources were explicitly modeled. So --  
20 Q And then go on and read the next sentence.  
21 A This is why EPA and MDE and all other regulatory  
22 agencies in the U.S. rely on conservative background methods  
23 to maintain a tractable analysis when evaluating new or  
24 modified facilities. I just clarified --  
25 Q Okay. And --

Page 100

1 A -- but let me clarify what I --  
2 Q Mr. Sullivan, please.  
3 MR. GROSSMAN: Well, hold on a second. Let him  
4 finish his --  
5 MS. CORDRY: Can he just answer the question once  
6 in a while? When I ask him if he said something --  
7 MR. GROSSMAN: He's trying. Let him finish his --  
8 MS. CORDRY: Okay. All right.  
9 MR. GROSSMAN: Go ahead.  
10 THE WITNESS: I was concerned the record would be  
11 confused if I just answered that question yes or no, because  
12 the issue is, yes, I wrote that --  
13 BY MS. CORDRY:  
14 Q Okay.  
15 A -- however, EPA and MDE allow for modifications of  
16 the most conservative method because many times, if you do  
17 an analysis that way, you're showing an on-paper violation;  
18 it's not real, and they allow various ways to reevaluate  
19 background in less conservative ways for air quality  
20 permits.  
21 Q I understand that, Mr. Sullivan, and we might just  
22 get to that when I get to ask you that question, but if  
23 you'd let me ask the question and just answer --  
24 MR. GROSSMAN: Go ahead --  
25 MR. GOECKE: Objection.

Page 101

1 MR. GROSSMAN: -- you don't have to make a speech.  
2 BY MS. CORDRY:  
3 Q Okay. When you were reading that, you skipped  
4 over a sentence, didn't you there, the one that starts with  
5 of course?  
6 A Well, I went to where, I think the sentence you  
7 asked me about. I went right -- once I realized where it  
8 was, I went to that statement.  
9 Q Okay. So you made that statement, and you said  
10 the reason why they do this is because, of course, it is not  
11 feasible to model all sources that significantly contribute  
12 to the air quality in the Wheaton area, either singly or on  
13 a collective basis, correct?  
14 A That's correct.  
15 Q That's why they use this conservative background  
16 method?  
17 A Well, you're implying it's one method. It's not  
18 one method.  
19 Q Well, I'm just reading your sentence: This is why  
20 they use the conservative background method to maintain a  
21 tractable analysis. That's what you said, correct,  
22 Mr. Sullivan?  
23 MR. GROSSMAN: That's what he said. It's --  
24 MS. CORDRY: Okay.  
25 MR. GROSSMAN: -- whatever he said is in the

Page 102

1 writing. You don't have to --  
2 MS. CORDRY: Okay. Well, I'm just --  
3 THE WITNESS: But, Ms. Cordry, it's different than  
4 what you just quoted. What it says is: This is why EPA and  
5 MDE and all other regulatory agencies in the U.S. rely on  
6 conservative background methods, plural, to maintain a  
7 tractable analysis when evaluating new or modified  
8 facilities. What we modeled here was the most conservative  
9 that could possibly be done.  
10 BY MS. CORDRY:  
11 Q You're absolutely sure that it's the most  
12 conservative method that EPA uses?  
13 A It is the most conservative method they use.  
14 Q Okay. Well, we'll come back to that in a bit, but  
15 okay. When you stated there -- in fact, when you state that  
16 you used the highest measured concentration, you don't  
17 actually mean the highest measured concentration at any hour  
18 of any day of the year, correct?  
19 A Where is that statement?  
20 Q I'm just saying, you said the highest measured  
21 concentration. I'm asking you that you don't actually mean  
22 the highest number that is ever measured over the course of  
23 the year, do you?  
24 A In what context? I mean, which site, which  
25 location are you talking about? I mean, I'm not --

Page 103

1 Q Any of these. Are there any of these --  
2 MR. GROSSMAN: I think he's asking, where are the  
3 words highest measured concentration.  
4 BY MS. CORDRY:  
5 Q Okay. On the front page, where we just asked the  
6 question --  
7 MR. GOECKE: Page 16?  
8 MS. CORDRY: Yes.  
9 BY MS. CORDRY:  
10 Q The second sentence there: Background  
11 concentrations in the Costco analyses were based on the,  
12 quote, highest measured concentration measured in Montgomery  
13 County and surrounding areas, as necessary. So my question  
14 to you is, when you use those words, quote, highest measured  
15 concentration, you don't actually mean the highest hour  
16 measured any hour of any day of the year, do you?  
17 A We do not.  
18 Q Okay. Good. Okay. You're in fact referring to  
19 these measures like the 98th percentile for NO2  
20 measurements?  
21 A Whatever, whatever is appropriate for the standard  
22 being evaluated, yes.  
23 Q Okay. So an actual, literal highest measured  
24 concentration could be a fluke on one day, some  
25 extraordinary event. So that's why they use the 98th

Page 104

1 percentile, to eliminate these unusual events?  
2 A Could be a system malfunction, unusual events,  
3 various, various factors that have EPA rely upon a set  
4 percentile or a set basis of doing it, but it's all  
5 specified --  
6 Q Right. Right. And they often say this gives you  
7 a more stable kind of determination, as to whether you're  
8 going over the maximum or not, by coming back a little bit  
9 from the absolute highest concentration?  
10 A I mean, it's different -- yeah, that's correct in  
11 principle but different for each pollutant and averaging  
12 time.  
13 Q Okay. And in terms of the statement about the  
14 highest measured concentration in Montgomery County and  
15 surrounding areas, would you agree you made essentially the  
16 same statement in both your November and December reports as  
17 well?  
18 A I don't recall.  
19 Q Okay. I'll show you what you said in November,  
20 and this is actually two pages here. One is a page from the  
21 November report, and the other is the page from the December  
22 report.  
23 MR. GROSSMAN: If I recall -- and it's been  
24 probably a year -- the December report was superseded by the  
25 January 2013 report, is that correct?

Page 105

1 MS. CORDRY: Right, but I want to show the  
2 evolution of this particular --  
3 MR. GROSSMAN: Okay.  
4 BY MS. CORDRY:  
5 Q And in --  
6 MR. GROSSMAN: I mean, it wasn't just a  
7 supplement. It was superseding the December report.  
8 MS. CORDRY: Well, I think we'll see there wasn't  
9 a change in this particular regard.  
10 BY MS. CORDRY:  
11 Q In November -- first off, do you recognize this  
12 discussion from your November report?  
13 A Those pages from my -- I confirm, it's from my  
14 November 2012 report.  
15 Q Okay. And at the bottom of the second paragraph  
16 there, the last sentence starts off: For the evaluation of  
17 the National Ambient Air Quality Standards. See that  
18 sentence?  
19 A Which paragraph are you on?  
20 Q The second paragraph.  
21 A Okay. I see that sentence.  
22 Q Okay. It says: The cumulative impacts from all  
23 of these sources is then added to the maximum concentrations  
24 for each pollutant and applicable averaging time that was  
25 measured in Montgomery County over the past three years.

Page 106

1 Okay.

2 A That's what it says.

3 Q So, again, we say the maximum concentration.

4 Okay. And then in your December report, which is the second

5 page there, this one now uses, I think, pretty much exactly

6 the same language you used in January. There's the sentence

7 at the end of the first paragraph there, and then there are

8 the other sentences at the end of the third paragraph.

9 A Well, just to clarify, when I say maximum, I'm

10 referring to, if it's the 98th percentile, we use the 98th

11 percentile; if it's annual, it would be the annual. I'm not

12 saying -- I'm not implying here that we'll take the highest

13 one hour of the entire year --

14 Q Okay. No. I --

15 A -- and add that on to the modeled value.

16 Q And I'm not asking you that, in particular. We

17 clarified that, that that's not the way people do, but you

18 are saying you use the highest number in Montgomery --

19 MR. GROSSMAN: All right. So let's just --

20 MS. CORDRY: Okay. But what I'm asking him --

21 MR. GROSSMAN: -- he said, used similar language.

22 MS. CORDRY: Okay.

23 BY MS. CORDRY:

24 Q So I'm asking you, again, you have stated here

25 that you used -- in this case, you've now moved to say the

Page 107

1 highest number in Montgomery County or the surrounding

2 areas, with that caveat about the 98th percentile, as the

3 way you measure the, quote, highest number, correct?

4 A That's what it says.

5 Q Okay. And you moved beyond Montgomery County

6 because Montgomery County does not in fact have NO2

7 monitors, is that correct?

8 A Or CO --

9 Q Or CO.

10 A -- I mean, at that time. Basically, we're saying

11 that -- we're trying to represent Montgomery County and

12 Wheaton --

13 Q Right.

14 A -- and if we don't have a monitor there, we'll use

15 another location.

16 Q Okay. So you're now outside of Montgomery County.

17 You're talking about the surrounding areas?

18 A Well, I'm talking about areas that can be

19 reasonably expected to be representative of suburban

20 Montgomery County.

21 Q And in terms of, going back to your January

22 report, in terms of talking about the, using this maximum

23 number and so forth -- I'm sorry. One second here. If you

24 move down to page 20 there of what I gave you for the

25 January report --

Page 108

1 A All right.

2 Q -- when you're talking about why this, one of the

3 reasons why this is conservative, you're pointing out at

4 this point that the maximum background level is not

5 necessarily the level that would be applicable at the same

6 time as the maximum modeled concentration?

7 A Which sentence are you referring to?

8 Q Well, it starts on the second paragraph there on

9 page 20: In order to provide perspective on the degree of

10 conservatism in the background term, more realistic

11 representation of background concentrations are shown in

12 Tables 4-5 through 4-9. Do you see that?

13 A That's correct. That's what it says.

14 Q So this is one where you were showing the

15 conservative background, which was this highest number you

16 were picking, and then you were also showing the actual

17 background for that particular time period?

18 A Correct. They coincided in time.

19 Q So is this the same kind of concurrent background

20 matching that you are now using in your analysis?

21 A We certainly -- we showed in this for perspective

22 what the concentration actually was when the peak occurred.

23 Q Okay. So you knew, obviously, back in November of

24 2012 that using the high background would obviously give you

25 a higher number than if you used these matched concurrent

Page 109

1 backgrounds, correct?

2 A Sure.

3 Q Okay. I mean, this wasn't something that came up

4 new or that you were unaware of from anything that Dr. Cole

5 presented in his testimony or anybody else from the

6 opposition?

7 A I don't recall if Dr. Cole mentioned this or not,

8 but clearly I showed in this report the background in two

9 different ways.

10 Q Okay. So this was like a year before Dr. Cole

11 ever got on the stand to testify, you knew about this idea

12 that you could have used concurrent backgrounds?

13 A Well, sure.

14 Q Okay. But at that time, you weren't really -- you

15 were just showing this as perspective on how conservative

16 you were?

17 A That's what I stated.

18 Q But now you do want us to rely specifically on the

19 matching backgrounds?

20 A You can rely upon matching background or you can

21 look at the culpability analysis and rely upon whatever

22 number you want. In other words --

23 Q Well, I'm asking you --

24 A Just let me explain. We showed, we showed a more

25 accurate assessment in February, reducing conservatism,

Page 110

1 modeling NO2 specifically. If you, anyone that feels that,  
2 you know, that that paired background approach, they don't  
3 like it, they can go to the culpability analysis and look at  
4 what that background was versus what the background would be  
5 if you used 83, as you showed -- it's like for NO2, one-hour  
6 -- and you can assess it either way.  
7 Q Okay.  
8 A Your conclusion will be the same --  
9 Q Well --  
10 A -- but there's clearly two ways you can go, and I  
11 provide the data in a way you can interpret it either way.  
12 Q Okay. We'll get to that later on if we don't jump  
13 ahead, but for right now I am just asking you, right now, in  
14 your Stage II and Stage III analysis, which you're asking  
15 the Hearing Examiner to rely upon, you're now using only  
16 these matched backgrounds, correct?  
17 A I am using -- I showed the results three ways --  
18 Q I asked you about --  
19 A Well, let me --  
20 Q -- Stage II and Stage III, Mr. Sullivan.  
21 MR. GOECKE: If he could finish.  
22 THE WITNESS: I'm just clarifying. I showed it  
23 three ways. In Stage I, I showed it the way with using a  
24 conservative background. In Stages II and III, I showed a  
25 more realistic approach.

Page 111

1 BY MS. CORDRY:  
2 Q So now answer my questions. In Stage II and Stage  
3 III, you're now asking that the Hearing Examiner only use  
4 the concurrent background?  
5 A No, I'm not, because as I just indicated -- for  
6 example, if you look at Stage III and you look at the  
7 background contribution, the maximum around the queue, I  
8 believe it's a number like around 73 micrograms or some  
9 number in that order. If you want to rely upon the data you  
10 just provided, so it's 83, add 10 micrograms to that 121  
11 that I showed for the total. You'd go from 121 to 131.  
12 So I'm not asking the Hearing Examiner to just  
13 rely upon what we did. If he chooses to, he could take your  
14 number of 83 and subtract out the 73 or whatever it is I  
15 used and add the 10, add the difference. So I provided the  
16 opportunity for either Mr. Grossman or anyone to look at it  
17 both ways.  
18 Q Mr. Sullivan, just, this seemed to come up a lot.  
19 When did I tell you you should use 83?  
20 A Your data that you just showed --  
21 Q No.  
22 A Let me finish the statement. You provided data  
23 that I got last night at 8 o'clock at night. I was out  
24 yesterday. I looked over it as much as I could. You're  
25 showing a background, based upon EPA's updated analysis

Page 112

1 through 2013, of 83 micrograms per cubic meter as  
2 NO2, one-hour, 98th percentile. That's what you showed.  
3 Now, if, if -- and I don't disagree. So my point is, if  
4 Mr. Grossman felt that our analysis using paired background  
5 was not conservative enough, all he has to do is add 10  
6 micrograms to our results and he can look at it the other  
7 way.  
8 Q Mr. Sullivan, I cited that figure for Arlington.  
9 When did I say that you should use the Arlington number?  
10 A I didn't ask your opinion on that. You  
11 provided --  
12 Q Well --  
13 A Let me finish. You provided data that's updated  
14 since our February report --  
15 Q I agree.  
16 A -- that showed 83. I accept that. I didn't  
17 confirm that last night, but I accept that. With that  
18 number -- that would be the 98th percentile -- if you want  
19 to use a straight background number all the time rather than  
20 paired, Mr. Grossman can do so.  
21 Q But, Mr. Sullivan, what I'm asking you is, and  
22 this seems to come up a lot in your testimony, I gave you, I  
23 put that number in, yes, but where did I tell you -- and you  
24 just said, the number you said I should use; you testified  
25 that right now, that I said you should use that 83 number --

Page 113

1 where did I say at any point in these proceedings that you  
2 should use that background number from Arlington?  
3 A I'll rephrase. The data that you provided that I  
4 received last night, showing EPA's updated data for 2013,  
5 shows an average of 83 micrograms. That would be for 2011,  
6 '12, and '13 for the Arlington site. I'll accept that as  
7 being correct. I can confirm it later. If that is correct,  
8 in my judgment that provides another way that Mr. Grossman  
9 or anyone could interpret our culpability analysis, and if  
10 he wants to be more conservative -- I don't recommend doing  
11 it because what I have done, in my judgment, is very  
12 appropriate for modeling NO2 in a refined way -- but if  
13 you're not comfortable, add the 10 micrograms --  
14 Q Okay.  
15 A -- and you'll find it goes from 121 to 131.  
16 Q Okay. So that is your approach as to what you  
17 think should be done in terms of which monitor should be  
18 used, not what I said, correct?  
19 MR. GROSSMAN: He's answered now three times.  
20 MS. CORDRY: Okay. Well -- all right.  
21 MR. GROSSMAN: He has said, when he used the term  
22 that you said should be used, he was referring to the fact  
23 that you provided him data --  
24 MS. CORDRY: Right.  
25 MR. GROSSMAN: -- last night. That's --

Page 114

1 MS. CORDRY: And I think --  
2 MR. GROSSMAN: -- what he was meaning.  
3 MS. CORDRY: I understand.  
4 MR. GROSSMAN: He said that now three times,  
5 Ms. Cordry.  
6 MS. CORDRY: Okay. And that's why we want  
7 clarify, because that's what keeps coming up in these  
8 hearings.  
9 MR. GROSSMAN: You don't have to clarify it  
10 anymore. He has answered it three times.  
11 MS. CORDRY: All right. So I -- okay.  
12 BY MS. CORDRY:  
13 Q And when you testified back in June last year, did  
14 you again testify that you were using this highest  
15 concentration in Montgomery County and surrounding areas as  
16 a way to show conservatism?  
17 A I don't recall what I testified last June. Do you  
18 have the transcript?  
19 Q Yes. If you'd turn back to page 224 in the  
20 transcript, pages 224 and 225, are you again expressing here  
21 that you could have used this matched background method but  
22 you're not because you're being conservative?  
23 MR. GOECKE: What lines are you citing to?  
24 MS. CORDRY: Starts at line 11 on page 224 and  
25 continues down into page 225.

Page 115

1 THE WITNESS: I mean, it says what it says. I'm  
2 not sure what you're asking me.  
3 BY MS. CORDRY:  
4 Q Well, I'm asking you, were you at this point again  
5 testifying that you could have used that method but you  
6 didn't because you were being conservative?  
7 A Could I have used this method, and at that point  
8 in time, I didn't think -- at that point in time, we were  
9 not -- this is June of 2013?  
10 Q Yes.  
11 A We weren't modeling the inside of a source, the  
12 gas queue, looking at what the concentrations would be in  
13 that extreme situation, and I didn't feel it was necessary  
14 at that point in time. We're not modeling NO2 specifically,  
15 as I am in 2014. In my judgment, it was very appropriate to  
16 use paired analysis as well as OLM and other factors, and I  
17 did so.  
18 Q And that was also the point where you still had  
19 the NO2 values with the incorrect conversion ratios?  
20 A That's all in the record.  
21 Q Okay. So, at that point, you thought you had a  
22 lot of room, spare concentration levels that you wouldn't be  
23 going over?  
24 A Well, certainly, with the previous background  
25 values, there's a lot more margin; that is, that is correct.

Page 116

1 And at that point in time, we also weren't focused on what  
2 are the impacts inside a transient gas queue or loading  
3 dock.  
4 Q And looking at the bottom of 225, you again state  
5 that the EPA says to use these kind of conservative methods  
6 because you can't model everything? The last paragraph  
7 there on 225.  
8 A I'm referring to EPA's standard, Tier 1 type,  
9 conservative approach.  
10 Q Well --  
11 A I was using the, assuming that the 98th percentile  
12 or the maximum CO, one-hour, whatever it is, occurs at the  
13 same time as every receptor every hour --  
14 Q Right.  
15 A -- and that statement is correct.  
16 Q And that's because the EPA recognizes that you  
17 can't go out and monitor for every gas station and every  
18 factory that's built; that's why they have you use this  
19 conservative methodology?  
20 A As I testified earlier, they don't require you to  
21 always use that most conservative methodology. You can.  
22 Q And that's what you were doing at this point when  
23 you thought you were well below the standard?  
24 A That's correct.  
25 Q Okay. And on the first page of that document, you

Page 117

1 again -- this is page 206 -- in terms of, again, the  
2 measurements that you were using, you again say that using  
3 available regional-measured data, you add the highest values  
4 on to what you're modeling. That's the standard procedure.  
5 A That is the standard, most conservative procedure,  
6 but I keep on saying that EPA guideline allows for  
7 alternative background treatments, which I've used in other  
8 applications. You would tend to start with the most  
9 conservative, and if you need to, you certainly have the  
10 right to go to less conservative treatments.  
11 Q I understand, but --  
12 MR. GROSSMAN: No, let's not go over this --  
13 MS. CORDRY: Okay.  
14 MR. GROSSMAN: -- over and over and over again.  
15 He already said so many times. You don't have to go over  
16 the same thing --  
17 MS. CORDRY: Right, and I --  
18 MR. GROSSMAN: -- over and over again, Ms. Cordry.  
19 MS. CORDRY: I understand, but I just -- every  
20 time he testifies --  
21 MR. GROSSMAN: I know you understand. If you  
22 understand, then move on to the next thing. You don't have  
23 to go over the same point over --  
24 MS. CORDRY: Okay.  
25 MR. GROSSMAN: -- and over and over again.

Page 118

1 MS. CORDRY: I'm just, I would like -- I was just  
2 trying to point out how many different times he has used  
3 this in his own testimony --  
4 MR. GROSSMAN: I understand --  
5 MS. CORDRY: -- that --  
6 MR. GROSSMAN: -- but you've already pointed that  
7 out. Move on to something else.  
8 MS. CORDRY: Okay.  
9 BY MS. CORDRY:  
10 Q All right. What I was trying to actually get at  
11 was that you again were saying --  
12 MS. CORDRY: Let me just ask the question.  
13 MR. GROSSMAN: No. No. Move on to something  
14 else. You've already covered this point.  
15 MS. CORDRY: I am trying to move on, which was --  
16 BY MS. CORDRY:  
17 Q The question was, in your testimony you had stated  
18 you used the highest value in Montgomery County and the  
19 surrounding areas, correct? You testified to that on  
20 numerous occasions?  
21 MR. GOECKE: As necessary, it said.  
22 BY MS. CORDRY:  
23 Q As necessary, because Montgomery County doesn't  
24 have several of the monitors, correct?  
25 MR. GROSSMAN: And you've covered that too. He's

Page 119

1 answered that already.  
2 BY MS. CORDRY:  
3 Q It's a matter of geography, obviously. The  
4 surrounding areas for Montgomery County include the District  
5 of Columbia as well as Prince George's County and Arlington,  
6 Virginia?  
7 A I wasn't using that term in that context at all.  
8 I was, as I mentioned previously, I was using the context of  
9 being representative of suburban Montgomery County, such as  
10 Wheaton. I would have -- I would not clearly used, nor did  
11 we ever discuss using, D.C. monitors to do that.  
12 Q But you didn't ever say all that. You said,  
13 Montgomery County and the surrounding areas. So my question  
14 was simply, the surrounding areas do include the District of  
15 Columbia, do they not?  
16 A Certainly in a geographic sense, they do, but for  
17 the objective stated here, that would not be appropriate, to  
18 use the District of Columbia's central business district to  
19 represent suburban air quality.  
20 Q Can you define what you mean by the central  
21 business district?  
22 A I'm referring to the District of Columbia and the  
23 heart of where the city is located. Plus the District, in  
24 general, has much more traffic, in general, and would be  
25 expected to have higher concentrations, in general, than the

Page 120

1 suburban areas would be. This is all covered in the  
2 protocol.  
3 Q Okay. So you now moved from the central business  
4 district to all of the District of Columbia, is considered  
5 -- you couldn't look at any monitor in the District of  
6 Columbia because all of the District of Columbia is  
7 inapplicable?  
8 A I'm just saying -- I'm confused, because this  
9 discussion was part of the protocol that was discussed  
10 previously. My rebuttal report did not change any of the  
11 sites. So we can go back to, you know, why we did the  
12 protocol the way we did, but I'm not sure it pertains to  
13 what we're talking about today.  
14 Q Well, you've -- okay.  
15 MR. GROSSMAN: Yes. I have to ask that same  
16 question. Why is this a cross-examination regarding the  
17 rebuttal direct? It seems to be going back to the original,  
18 beyond the original testimony. I mean, that's what I don't  
19 understand. Why are we going backwards, beyond the direct  
20 on rebuttal?  
21 MS. CORDRY: Because he's changing the -- he's  
22 changing the model, the version of the background that he's  
23 using and --  
24 MR. GROSSMAN: But he said he didn't change that  
25 protocol --

Page 121

1 MS. CORDRY: Well, but he's not abiding --  
2 MR. GROSSMAN: -- and that didn't come up in --  
3 MS. CORDRY: Okay. But he's not abiding by --  
4 MR. GROSSMAN: -- that didn't --  
5 MS. CORDRY: -- the protocol anymore. So that's  
6 one of the questions we want to do, is when did you move  
7 away from the protocol and on what basis did you move away.  
8 MR. GROSSMAN: I'm just saying that your  
9 cross-examination should be directed towards the direct on  
10 rebuttal, not to his, all of his testimony at all times --  
11 MS. CORDRY: Okay. I am trying to get to there  
12 because --  
13 MR. GROSSMAN: -- because we'll never get done if  
14 we're going back over the cross-examination of everything he  
15 ever said.  
16 MS. CORDRY: On rebuttal he directly testified  
17 about the background memo we did, about why he was not using  
18 the other monitors, why they were in the central business --  
19 MR. GROSSMAN: I understand, and I've given you a  
20 lot of leeway, but you know, let's --  
21 MS. CORDRY: Well, this is testimony he put in  
22 directly on rebuttal. I am asking him about that direct  
23 testimony --  
24 MR. GROSSMAN: Well, no, that's not what you  
25 asked.

Page 122

1 MS. CORDRY: -- that direct rebuttal testimony.  
2 MR. GROSSMAN: No. I think you went beyond that,  
3 but go ahead.  
4 BY MS. CORDRY:  
5 Q Okay. Well, that's what I'm trying to find now.  
6 When you first off started saying Washington, you couldn't  
7 use monitors in the central business district, and I asked  
8 you to define that, and now you're saying that everywhere in  
9 D.C. is not potentially usable for any comparative monitor,  
10 correct?  
11 A I'm not saying that directly. I'm saying that  
12 perhaps there's a location somewhere on the outskirts of  
13 D.C. that may have similar concentrations as Wheaton. What  
14 I've testified to is that we had a protocol meeting; we  
15 discussed using Beltsville, Rockville, and Arlington; and  
16 the judgment of the folks involved at that meeting, that was  
17 a reasonable set.  
18 Now, we can disagree upon what monitors to use in  
19 Beltsville, and Dr. Cole did have a disagreement with us  
20 there. That's fine, but we never talked about District of  
21 Columbia in those discussions, nor since. And so our  
22 objective was not to find the highest measured concentration  
23 in the metropolitan area. Our objective was to be  
24 representative of Wheaton.  
25 Q But your testimony actually said numerous times

Page 123

1 that you were picking the highest measured concentration in  
2 Montgomery County and the surrounding areas, did it not?  
3 A I've answered that question.  
4 Q I know.  
5 MR. GROSSMAN: He has answer that question.  
6 MS. CORDRY: And he had answered that that was  
7 what his testimony was: the highest in the surrounding  
8 areas.  
9 MR. GROSSMAN: He's answered the question.  
10 MS. CORDRY: Okay.  
11 BY MS. CORDRY:  
12 Q Can you actually tell us anything about the  
13 monitors in D.C.? Do you know where they are located?  
14 A I have looked on a map where they're located.  
15 Q Okay.  
16 A I can't, off the top of my head, tell you each  
17 one, but yes, I've analyzed that.  
18 Q Is it fair to say that there's only one that you  
19 would consider in the central business district?  
20 A I'm referring to the metropolitan area. The  
21 center of that core is Washington, D.C., and we can quibble  
22 about where is the central part of that. My point is, if  
23 you're looking for suburban locations to be representative  
24 of that, it wouldn't make sense to go into the District of  
25 Columbia, in general, because it's not -- it's not a

Page 124

1 suburban location, in general. I might be able to find one,  
2 but in the judgment of the people involved in our protocol  
3 meetings, including Dr. Cole, we talked about Beltsville,  
4 Rockville, and Arlington.  
5 Q So you are testifying that Dr. Cole affirmatively  
6 stated that he agreed with the use of Arlington?  
7 A I don't recall anything in our protocol  
8 discussions or any in writing documentation with Dr. Cole  
9 that he suggested using any stations in the District of  
10 Columbia. I don't recall him saying he wanted to use a  
11 different monitor for NO2 than Arlington. What I do recall  
12 is there were three monitors with PM2.5 at Beltsville and  
13 Dr. Cole wanted us to average all three, which at one point  
14 we did. Looking more closely at the data, we don't agree  
15 with that approach anymore; we don't.  
16 Q I'm sorry. You're saying he asked you to average  
17 the three?  
18 A That's my recollection --  
19 Q As opposed to --  
20 A -- or maybe to use the highest one. I'll rephrase  
21 that.  
22 Q In fact, is that not correct that he asked you to  
23 use the high monitor at --  
24 A I believe that he did.  
25 Q Yes. Okay.

Page 125

1 A We didn't, we didn't -- we never did that. We  
2 didn't agree with that, and reasons I'm sure we'll get into  
3 later.  
4 Q I'm sure we will because I don't think you're  
5 correct on that either. In any case, can you -- my  
6 question, I think, was, did Dr. Cole ever affirmatively say  
7 to you that he agreed with the use of Arlington?  
8 A I don't -- I don't recall the verbal. What I do  
9 recall is we had written communication back and forth --  
10 Q And is there any --  
11 A -- and he didn't agree with everything, and he  
12 laid out what he didn't agree with. I don't recall in his  
13 response, written response or verbal, Dr. Cole saying that  
14 he thinks Arlington was a bad choice and we should use  
15 something in the District of Columbia or some other place.  
16 Q And, in fact, at that point, the only thing that  
17 he really referred to was the Beltsville monitor, correct;  
18 he was discussing that one?  
19 A For NO2?  
20 Q No, for PM2.5.  
21 A I recall Dr. Cole wanting to use the highest of  
22 the three PM2.5 monitors as the basis for background.  
23 Q And, in fact, at that point, again, in your  
24 protocol you were showing the incorrect conversion factors  
25 for NO2; so it would have looked extremely low at that point



Page 126

1 in terms of --

2 A You're talking about PM2.5.

3 Q I'm talking about Arlington.

4 A All right.

5 Q In fact, at Arlington, in your protocol you were

6 using the incorrect conversion factors, correct?

7 A I'd acknowledged that, yes.

8 Q So if anybody was looking at NO2, it would have

9 looked like that wasn't much of a place to find out if there

10 was a problem, wouldn't it have?

11 A I'm not sure where you're going. I'm not sure how

12 to answer that question.

13 Q Well --

14 MR. GROSSMAN: And I would agree,

15 if-anybody-were-looking-at questions --

16 MS. CORDRY: Okay.

17 MR. GROSSMAN: -- it's very difficult --

18 MS. CORDRY: Okay.

19 MR. GROSSMAN: -- for anybody to answer.

20 MS. CORDRY: All right.

21 BY MS. CORDRY:

22 Q If someone is looking at where are the places

23 where you're closest to the standard when you looked at the

24 PM2.5 numbers versus the NO2 numbers that you were showing

25 in your protocol, the NO2 number for your background looked

Page 127

1 very far below the standard, did it not?

2 A Well, if you use an incorrect conversion, it'd all

3 be relatively the same. That wouldn't affect the site

4 selection in any way.

5 Q I understand, but my question to you, if you would

6 answer it, was that looking at that, it would look like the

7 number was very low compared to the standard?

8 A We have discussed that, yes.

9 Q And that was probably not then something that

10 someone would concentrate on if they were looking at where

11 is there going to be violations? That would not be their

12 primary focus of investigation?

13 A Well, you're asking what I concentrated on or who?

14 I mean, I'm not -- I can't follow your questions.

15 Q In general, if someone was looking to investigate

16 where the station might violate the standards, would NO2 at

17 that point, looking at your protocol number, have been the

18 place that they would concentrate on?

19 MR. GOECKE: Objection. Speculative.

20 MR. GROSSMAN: I'm going to sustain that. I

21 think --

22 MS. CORDRY: All right.

23 MR. GROSSMAN: -- once again, what's the point, in

24 general, if somebody would look at -- what is the point in

25 that?

Page 128

1 MS. CORDRY: The point is that we are looking at

2 what the NO2 numbers are and whether Arlington is an

3 appropriate choice then or now and whether, if someone is

4 going to measure the highest concentration, as it's been

5 stated, whether we should be using Arlington, because it's

6 going to make some major differences in terms of where the

7 overall --

8 MR. GROSSMAN: But he's already, he's testified

9 about his opinion about it. What's the point in asking

10 about what other people would think?

11 MS. CORDRY: Well, he's --

12 MR. GROSSMAN: Let's just -- please try to hone

13 your questions in.

14 BY MS. CORDRY:

15 Q Looking at Exhibit 564(b) and (c), you would

16 certainly agree that Arlington is not by any means the

17 highest concentration in this general area, correct?

18 A And you're limiting this discussion to NO2?

19 Q Yes.

20 A And the area refers to what?

21 Q The monitors in the, this is labeled something

22 like the Washington/Maryland/Virginia -- I forget how this

23 area is located, but when you go on the EPA website and you

24 pull up that combination of monitors in this area --

25 statistical area, it's called, a CBSA. I forget what the

Page 129

1 initials stand for, but --

2 A It's not the highest in the metropolitan area.

3 Q Right. In fact, it's pretty much

4 middle-of-the-road?

5 A It is what it is. Depends what year you're

6 talking about but it's pretty typical.

7 Q And the D.C. sites are higher?

8 A Yes, they are.

9 Q Okay. And I understand you discussed why you

10 didn't think the Colvin Street site was a reasonable

11 comparison -- because it was too industrialized?

12 MR. GOECKE: Objection. Asked and answered.

13 Beyond the scope of --

14 MR. GROSSMAN: Yes.

15 MR. GOECKE: -- direct rebuttal and irrelevant.

16 MR. GROSSMAN: I sustain that.

17 MS. CORDRY: Well, it was discussed on --

18 MR. GROSSMAN: I sustained it. Move on to another

19 thing.

20 MS. CORDRY: Okay. All right. It was discussed

21 on rebuttal.

22 MR. GROSSMAN: Yes, but you've asked and answered.

23 If you're trying to establish a contrast between his use of

24 the highest concentrations and the highest representative

25 concentration, which is what he said he used, you've

Page 130

1 established that. He didn't take the very highest.  
2 MS. CORDRY: Right.  
3 MR. GROSSMAN: So you've established that --  
4 MS. CORDRY: Okay.  
5 MR. GROSSMAN: -- and he said what he meant was  
6 representative, highest representative. So why keep on  
7 beating that horse over and over again? I heard it.  
8 BY MS. CORDRY:  
9 Q Now, turning to the CO monitors, again, you didn't  
10 pick the highest monitor in the surrounding area, did you?  
11 A That wasn't, that was not my objective. I did  
12 not.  
13 Q In this case, Beltsville, the monitor there, it's  
14 actually located in -- would you call that monitor there a  
15 suburban location, or is that really a pretty rural location  
16 in terms of the amount of surrounding vegetation and forest  
17 land and so forth?  
18 A I suppose, depending what scale or review you're  
19 referring to and how far you looked, what scope you're  
20 looking at for that site. It was the most representative  
21 location to the Wheaton area.  
22 Q And what was most representative about it?  
23 A Generally, it's proximity from the major  
24 metropolitan center, the major metropolitan area. We're  
25 already modeling the nearby roadways. This was a general

Page 131

1 contribution, and in our collective judgment -- I don't  
2 recall any disagreement on the selection of Beltsville for  
3 CO.  
4 Q And, again, if you look at Chart 564(d), is it  
5 fair to say that Beltsville is, in general, among the very  
6 lowest sites?  
7 MR. GROSSMAN: This is for CO, right?  
8 MS. CORDRY: Yes, for CO.  
9 MR. GROSSMAN: Okay.  
10 THE WITNESS: It's certainly significantly lower  
11 than the Washington, D.C., sites. There's no question about  
12 that.  
13 BY MS. CORDRY:  
14 Q Well, it's also lower than almost any other site  
15 on there, isn't it?  
16 A Well, I mean, it is what it is. In our judgment  
17 -- I mean, there were three meteorologists involved in that  
18 meeting -- it was the most representative location. The  
19 numbers show how it relates to other sites.  
20 Q Well --  
21 A It is lower. There's no, there's no question.  
22 It's relatively low. It's not --  
23 Q In fact --  
24 A -- I mean, Arlington is closer to a more heavily  
25 concentrated area, as is the District of Columbia. It's not

Page 132

1 that different than, say, St. Asaph Street in Alexandria.  
2 So it depends where you're located how high that number is  
3 going to be.  
4 Q And again, just, you will agree that it's  
5 basically, mostly, it's the lowest number on the chart?  
6 MR. GOECKE: Objection. Asked and answered.  
7 MR. GROSSMAN: He doesn't have to -- first of all,  
8 you don't have to -- and every time you say again, it means  
9 you're repeating a question he's already answered --  
10 MS. CORDRY: Well --  
11 MR. GROSSMAN: -- and the numbers speak for  
12 themselves. You've submitted -- it's an exhibit, Exhibit  
13 564(d). It shows all the numbers and you've highlighted it.  
14 I can see what the numbers are. What's the point in asking  
15 him whether one number is higher than another number  
16 arithmetically?  
17 BY MS. CORDRY:  
18 Q If you use the highest value listed here for CO in  
19 2013, the actual highest, which is at the 34th Street site  
20 in Washington, which is not in the -- you would agree,  
21 that's not in the central business district core, is it?  
22 A Which one are you referring to?  
23 Q The 34th Street Northeast site.  
24 A Without looking at a map and the site, I can't  
25 answer that question.

Page 133

1 Q It's the River Terrace school.  
2 A I don't recall where that's located, directly.  
3 Q It's on the far side of the Anacostia River.  
4 MR. GOECKE: Okay. Asked and answered.  
5 MS. CORDRY: Well, I'm trying to give him a little  
6 help to know where it is.  
7 MR. GROSSMAN: Well --  
8 MS. CORDRY: Well, I'm trying to figure out where  
9 his definition of central business district stops, for one  
10 thing.  
11 MR. GROSSMAN: All right.  
12 THE WITNESS: I don't believe any of the stations  
13 that I've looked at located in the District of Columbia are  
14 going to be representative of the Wheaton area, and I could  
15 reassess that in the future, but that's my recollection from  
16 what I've done in the past.  
17 BY MS. CORDRY:  
18 Q So, again, my question is, that's not in the  
19 central business district, is it?  
20 MR. GROSSMAN: Well --  
21 MS. CORDRY: I don't get an answer to my  
22 questions.  
23 MR. GROSSMAN: Once again, he's answered the  
24 question. He doesn't -- without seeing a map, he can't say,  
25 and he says he considers the metropolitan area. You keep on

Page 134

1 going over the same thing over and over again. I understand  
2 the point you're making, Ms. Cordry --  
3 MS. CORDRY: Okay.  
4 MR. GROSSMAN: -- I understand the difference in  
5 the readings. I see it, but asking the witness over and  
6 over again the same question does not, is not appropriate.  
7 MS. CORDRY: Okay, but I still have not gotten an  
8 answer as to what he considers the central business  
9 district, for instance.  
10 MR. GROSSMAN: He's answered that. He said -- he  
11 was talking about the District of Columbia. He's answered  
12 that.  
13 MS. CORDRY: Okay, because that is a different  
14 question than the central business district. We've been  
15 using those two terms --  
16 MR. GROSSMAN: I know, but he's answered what he  
17 was talking about when he used that term. Asking him five  
18 times is not allowable.  
19 BY MS. CORDRY:  
20 Q And at this point, you have moved away from using  
21 the rural analysis totally. If you, though, continue to use  
22 the rural analysis --  
23 MR. GROSSMAN: When you say at this point, what  
24 are you talking about?  
25 MS. CORDRY: This point in time, here in the

Page 135

1 hearing, in his current analysis.  
2 MR. GROSSMAN: In his rebuttal analysis?  
3 MS. CORDRY: Yes.  
4 MR. GROSSMAN: Okay.  
5 BY MS. CORDRY:  
6 Q If you continued to use the rural analysis, as  
7 Dr. Cole has argued for, or at least some average of the two  
8 and you added on the actual highest value in the surrounding  
9 metropolitan area, have you done any analysis as to how  
10 close that would bring you to the NAAQS standard?  
11 A Well, first, I'll clarify. You said I've  
12 abandoned the rural approach. I haven't abandoned that at  
13 all. What I, what I was -- initially our modeling was  
14 larger scale. We went, you know, way beyond the ring road.  
15 That was when we were focusing on and the discussion was  
16 focused on the pool, the school, and the closest home, and  
17 for that scale of analysis, rural was appropriate. After  
18 that, we started talking about the gas queue and the loading  
19 dock, and inside the ring road was the focus, and inside the  
20 ring road is urban.  
21 So, you know, I'm not abandoning or changing my  
22 mind. What I'm saying is the focus now is on there, which  
23 is where we're at. I'm going to use the most applicable  
24 dispersion coefficients, which I've shown in my rebuttal  
25 report why I believe it's urban, and you know, it speaks for

Page 136

1 itself.  
2 Q And I understand you say we've moved away. Have  
3 we ever said that we don't want to still consider the entire  
4 area?  
5 A I didn't say we've moved away. I said we did not  
6 move away. Oh, what I said was the focus now was on inside  
7 the mall, but I have not changed my position. If we're  
8 modeling out, way past Georgia Avenue, I'm going to use the  
9 rural --  
10 Q Okay.  
11 A -- that's EPA's guidance.  
12 Q And you're not providing us with any of that data  
13 anymore. When you started doing the updated reports, you  
14 focused in just on the mall and you've never given us the  
15 broader data anymore, correct?  
16 A Well, there's no reason to do so. It was under  
17 the -- we showed it was under the standard with the very  
18 conservative assumptions previously. So, I mean, I would  
19 then try to limit this -- I mean, there's 181 receptors.  
20 We're trying to make this more manageable. We're focusing  
21 on the mall, which is where the discussion has been for the  
22 past year.  
23 Q Well, you showed it was below the standard when  
24 you were using the incorrect conversion ratios, for  
25 instance.

Page 137

1 A No. I showed it both ways. Back on the August  
2 16th report, I show what it would be in the neighborhood  
3 using the corrected NO2 conversion. It was under the  
4 standard --  
5 Q Okay. But you didn't go out --  
6 A -- 100 percent, and assuming 100 percent NO2 --  
7 Q Yes. And you have not --  
8 A -- and NOx.  
9 Q -- you no longer go out even as far as the, like,  
10 for instance, the Georgia Avenue/University Boulevard  
11 intersection so we could see what the NO2 is on those  
12 roadways anymore?  
13 A I think I've answered that question.  
14 Q Well, I don't think so because I think I just  
15 asked it.  
16 A I have said the focus has been on the southern  
17 ring road, where the gas station is going to be located and  
18 the loading dock is. You can look at those concentrations  
19 and see what impacts the gas station and loading dock have  
20 to the north, southeast, and west, and you find they go down  
21 quite quickly. There was no reason for us to model a large  
22 area anymore now that we're focusing on the mall area  
23 itself.  
24 Q You're focusing on the mall area itself.  
25 A No. I mean --

Page 138

1 MR. GROSSMAN: Well, all right, he's answered  
2 that --  
3 MS. CORDRY: Well, okay, because I --  
4 MR. GROSSMAN: -- just move along to something  
5 else. He's explained why he did what he did.  
6 MS. CORDRY: Right, because I think we have asked  
7 to have the broader --  
8 MR. GROSSMAN: Well --  
9 MS. CORDRY: -- things still done, but --  
10 MR. GROSSMAN: -- you have your own expert. You  
11 can have anything done that you want, but you can't ask him  
12 to do modeling or analysis that's beyond what he's doing.  
13 That's -- you can ask him questions about it, and you have.  
14 MS. CORDRY: I think it's reasonable to say that  
15 our own expert cannot afford to do the modeling that he's  
16 doing. I --  
17 MR. GROSSMAN: Well, I --  
18 MS. CORDRY: -- think that's unrealistic there.  
19 BY MS. CORDRY:  
20 Q All right. You had originally been using for your  
21 monitors choices the single year highest value, correct?  
22 A We did early on use -- that was an extremely  
23 conservative approach -- yes, we did.  
24 Q And you continued to use that through your January  
25 report, correct?

Page 139

1 A I believe we did.  
2 Q Okay. And that didn't change until your August  
3 report?  
4 A I believe that's correct, yes.  
5 Q Okay. Which, again, after you had to change the  
6 conversion ratios?  
7 A Well, Ms. Cordry, as I've mentioned before, in  
8 doing modeling -- we offered to do the modeling using the  
9 highest value, which isn't EPA's policy, to be very  
10 conservative and try to achieve consensus. In August you  
11 started talking about what's going on in the gas queue. We  
12 could not afford that level of conservatism. We follow what  
13 EPA guidance allows, is to refine the analysis if you need  
14 to, and once you change the focus and standards change,  
15 we're going to change -- we're going to refine the modeling,  
16 as appropriate, to respond to those changes.  
17 Q We, in July, brought up the fact that the  
18 conversion ratios were incorrect, and we also talked about  
19 what's happened on the mall. Did we ever tell you that we  
20 wanted you to stop looking at the broader picture?  
21 MR. GROSSMAN: When you say did we ever tell you,  
22 you mean --  
23 MS. CORDRY: Did we in the opposition, anyone at  
24 this table here, tell Mr. Sullivan that we wanted him to  
25 stop looking at the broader picture?

Page 140

1 MR. GOECKE: Mr. Grossman --  
2 MR. GROSSMAN: I'll let you answer the question,  
3 but I don't see where it gets any. Did anybody in the  
4 opposition tell you that?  
5 THE WITNESS: I don't remember them directly  
6 telling us that, no.  
7 BY MS. CORDRY:  
8 Q Okay. So that you could still have looked at the  
9 same approach to using the background numbers of using, in  
10 the broader picture, of using the single highest year  
11 average?  
12 A I just gave the reason why we did not do that. It  
13 would not be appropriate at that point in time.  
14 Q And that has nothing to do with the fact that  
15 because the conversion ratio had to change, your numbers  
16 were much higher -- anywhere where you were modeling them,  
17 not just on the mall?  
18 A Well, that's one factor, but you know, as I  
19 mentioned, I'll mention it one more time, is that the  
20 standards changed, the PM2.5 standard changed; the issue  
21 with the conversion factor happened; the background values  
22 changed; Dr. Cole mentioned that if we're going to use less  
23 than 100 percent conversion for NOx, that we should use a  
24 method like OLM. Well, these -- all these factors result in  
25 a response. We're not locked into a protocol as everything

Page 141

1 else evolves and changes around it. We did our best to  
2 maintain that protocol, but the -- you know, it's a  
3 four-year process. This started in 2010, and so as things  
4 evolve, we're going to respond to those changes.  
5 Q Mr. Sullivan, you've now stated again that  
6 Dr. Cole said you should use the OLM method.  
7 A It's in the record what he said. I mean, I don't  
8 have the exact quote. If you just read --  
9 MR. GROSSMAN: I remember the testimony of  
10 Dr. Cole.  
11 BY MS. CORDRY:  
12 Q And it does not include that he's telling you you  
13 should use it. Did he not in fact --  
14 MR. GROSSMAN: No. He's -- I understand. He said  
15 that's one of the methods that's allowed to be used by the  
16 EPA but, in his own personal opinion, he wouldn't have --  
17 MS. CORDRY: Used it.  
18 MR. GROSSMAN: -- he wouldn't have gone beyond the  
19 Tier 1 thing. I understand.  
20 MS. CORDRY: But --  
21 MR. GROSSMAN: I remember Dr. Cole's testimony.  
22 MS. CORDRY: Right.  
23 MR. GROSSMAN: What's the point in asking this  
24 witness about it?  
25 MS. CORDRY: Well, the point is, this witness

Page 142

1 continually suggests that he's doing things because people  
2 ask him to do that, tell him to do that --  
3 MR. GROSSMAN: It doesn't matter. It doesn't  
4 matter to what I have to consider.  
5 MS. CORDRY: Okay, as long as we understand that  
6 these are not --  
7 MR. GROSSMAN: I remember Dr. Cole's testimony.  
8 I --  
9 MS. CORDRY: Okay.  
10 MR. GROSSMAN: -- recall it. I've read it also.  
11 So --  
12 MS. CORDRY: All right.  
13 BY MS. CORDRY:  
14 Q If you use the highest value from the 2010 to 2012  
15 period for NO2 for any of these monitors, as you've been  
16 stating, you would agree with what I said in my memo, that  
17 the highest single year value for 2010 to 2012 was in fact  
18 111, was it not?  
19 A I don't recall.  
20 Q Can you look at the chart and see?  
21 A Which one is it?  
22 Q 564(b).  
23 A And you're referring to which years again?  
24 Q 2010 to 2012, because you moved the years up.  
25 A If I went to 34th Street in D.C.?

Page 143

1 Q Yes. Yes.  
2 A It has a 111. I didn't, haven't done an analysis  
3 of that relative to our previous modeling.  
4 Q Okay.  
5 A It's certainly a higher number than I would use.  
6 Q And even the Alexandria health place, which is not  
7 in D.C., had 107?  
8 A I'm not going to use an unrepresentative location  
9 to add to Wheaton.  
10 Q Okay. I'm just --  
11 MR. GROSSMAN: The chart speaks for itself,  
12 doesn't it?  
13 MS. CORDRY: Okay.  
14 MR. GROSSMAN: You don't have to go through each  
15 number with the witness and say, what does it say on the  
16 chart? The chart is, assuming you're accurate in putting  
17 together the chart --  
18 MS. CORDRY: Okay.  
19 MR. GROSSMAN: -- and I haven't personally checked  
20 your numbers --  
21 MS. CORDRY: Right.  
22 MR. GROSSMAN: -- but I assume that you're going  
23 to authenticate this when you testify in your surrebuttal,  
24 but assuming you're correct, the chart speaks for itself.  
25 Why is, what's the point in having --

Page 144

1 MS. CORDRY: Well, one of the questions is -- one  
2 of the reasons why I was asking is because Mr. Sullivan  
3 stated he disagreed with much of what was in my memo, and  
4 what I'm trying to do is trying to figure out are you  
5 actually disagreeing with the numbers that are in the memo  
6 and what I'm saying alternative values were or are you  
7 simply saying you just don't think those should be used.  
8 THE WITNESS: I don't recall saying I disagree  
9 with most of the things in your memo. What memo?  
10 BY MS. CORDRY:  
11 Q The background memo that we did, the legal  
12 analysis memo that was turned in.  
13 A You mean maybe five or six months ago, where you  
14 show different sites?  
15 Q Well, it was actually turned in, I think, in  
16 February, and you testified to it in your testimony on  
17 direct, that you disagreed with --  
18 A Oh, I do disagree with that.  
19 Q Yes. And are you disagreeing with the numbers  
20 that are in there, or are you simply disagreeing that you  
21 think whether they should be used or not?  
22 A I disagreed with, as I recall, I disagreed with a  
23 number of things, but the central theme was you kept on  
24 saying I said I was going to use the highest value in the  
25 area and I didn't --

Page 145

1 Q Yes.  
2 A -- and my clarification was I used the most --  
3 highest, most representative location in the region, but  
4 there were other issues I disagreed with.  
5 Q Okay. But in terms of whether or not the memo  
6 accurately set out what would be, for instance, the highest  
7 value in the area, you're not disputing that I was, in fact,  
8 correctly setting down what were the highest values under  
9 the various scenarios that I laid out there, were you?  
10 A Because I didn't feel it was relevant. I didn't  
11 confirm your numbers, and just for the record, I didn't  
12 confirm your numbers. I glanced at it and found a few  
13 issues with the, this package that came in today.  
14 Q Do you want to tell us what those are?  
15 A I don't know what the -- it's 564, I'm sorry --  
16 MR. GROSSMAN: Yes.  
17 THE WITNESS: -- Exhibit 564. I didn't have the  
18 opportunity to confirm and validate all these numbers. So I  
19 don't know if they're right.  
20 BY MS. CORDRY:  
21 Q Well, I mean, I did not wait until 8 o'clock to  
22 send it over. So if you didn't get it until then, that  
23 wasn't because of when I sent it, but --  
24 A Well, I mean, just to clarify, I, I was, I was off  
25 on Tuesday --

Page 146

1 Q Okay.

2 A -- on Wednesday rather. So whatever I didn't get

3 Tuesday, I was gone during the day, I got it last night. So

4 I did what I could in about an hour and a half --

5 MR. GROSSMAN: So we're making assumptions at this

6 point that the numbers are correct. I don't have any

7 independent thing --

8 MS. CORDRY: And --

9 MR. GROSSMAN: -- but there's no point in asking

10 him about it because he didn't have an opportunity to check

11 it.

12 MS. CORDRY: And I did want to go ahead and put

13 these in. This is the -- I sent this around yesterday, as

14 well, which are the actual monitor value printouts from the

15 EPA website for 2013 for the different, different

16 pollutants.

17 MR. GROSSMAN: Thank you.

18 MS. CORDRY: And these are just a direct download.

19 So it's not a question of my typing or anything else. These

20 are, there should be -- this, I guess, would be 565. Whoop,

21 let me -- and actually, let me give you one because I gave

22 you one that had -- I'll give you one I didn't print on the

23 back of. Let me swap with you. That has print -- I save

24 paper by printing on the back of things. So let me take

25 that one back.

Page 147

1 MR. GROSSMAN: That's very green.

2 MS. CORDRY: I try to be green. All right. So

3 there should be two pages. The first two pages should be

4 labeled PM2.5, 2013.

5 MR. GROSSMAN: Yes.

6 MS. CORDRY: And these are for the

7 Washington/Arlington/Alexandria/D.C./Virginia/Maryland/West

8 Virginia geographic area label, although I've never seen

9 anything from West Virginia in here. So -- but that's the

10 name of this area. Then the next page would be NO2 for

11 2013.

12 MR. GROSSMAN: All right. Let's -- you want these

13 exhibitized?

14 MS. CORDRY: Yes, please. It could all just be

15 one exhibit, I believe.

16 MR. GROSSMAN: Pardon me?

17 MS. CORDRY: It could just be one exhibit, I

18 think.

19 MR. GROSSMAN: Yes. Okay. So this will be 565.

20 (A) will be the -- where is this from again? This is

21 from --

22 MS. CORDRY: This is downloaded from the EPA

23 monitor website.

24 MR. GROSSMAN: Okay. EPA monitor readings for

25 PM2.5. This is 24-hour, right?

Page 148

1 MS. CORDRY: Yes. Well --

2 MR. GROSSMAN: That's what it says on here.

3 MS. CORDRY: Yes.

4 MR. GROSSMAN: Twenty-four-hour, and then -- so

5 that's 565(a), and then 565(b) --

6 (Exhibit No. 565(a) was marked

7 for identification.)

8 MS. CORDRY: For NO2 for 2013.

9 MR. GROSSMAN: Oh, no. The one I have is -- well,

10 I have CO.

11 MS. CORDRY: Oh, well, they may just be in a

12 different order.

13 MR. GROSSMAN: Okay. So since I've already

14 written that, it'll be EPA monitor readings for CO and

15 that's one-hour and eight-hour.

16 (Exhibit No. 565(b) was marked

17 for identification.)

18 MS. CORDRY: Right. That would be (c) then?

19 MR. GROSSMAN: No. That's (b).

20 MS. CORDRY: Oh, that's (b)? Okay. I'll change

21 our numbers. Okay.

22 MR. GROSSMAN: One-hour and eight-hour, and

23 then --

24 MS. CORDRY: That actually works because the very

25 last sheet is, it's the only one that's from a different

Page 149

1 area. This is Virginia as a whole, because I wanted to pick

2 up the site in Richmond that Mr. Sullivan referred to last

3 week.

4 MR. GROSSMAN: All right. So 565(c) is EPA

5 monitor readings for NO2, one-hour. Okay.

6 (Exhibit No. 565(c) was marked

7 for identification.)

8 MR. GOECKE: That's for Virginia or

9 Washington/Arlington/Alexandria?

10 MS. CORDRY: There's two different NO2 -- the

11 first one is the Washington --

12 MR. GROSSMAN: I only have one NO2.

13 MR. GOECKE: I have two.

14 MR. GROSSMAN: It says, Page 1 of 1.

15 MS. CORDRY: Well, there should also be one there

16 with it labeled Virginia NO2. You don't have that?

17 MR. GROSSMAN: Not on mine.

18 MS. CORDRY: Here, if you don't have it, let me

19 give it to you. This goes with it as well.

20 MR. GROSSMAN: Yes. All of mine are --

21 MS. CORDRY: Okay. Here you go.

22 MR. GROSSMAN: -- Washington metropolitan area.

23 MS. CORDRY: That would be (d), I guess, then.

24 MR. GROSSMAN: Well, I'll make it part of (c), if

25 you, or do you want --

Page 150

1 MS. CORDRY: Well, it is separate from (c) --  
2 MR. GROSSMAN: All right.  
3 MS. CORDRY: -- in that (c) is dealing with the  
4 Washington metropolitan area.  
5 MR. GROSSMAN: All right. So (d), 565 (d) --  
6 MR. GOECKE: Is Virginia?  
7 MS. CORDRY: Yes, Virginia as a whole.  
8 MR. GROSSMAN: -- is EPA monitor readings for NO2,  
9 one-hour, in Virginia. Okay.  
10 (Exhibit No. 565(d) was marked  
11 for identification.)  
12 MS. CORDRY: Okay.  
13 MS. ADELMAN: And excuse me. Could I ask what  
14 565(a) was again, Mr. Grossman?  
15 MR. GROSSMAN: That was the EPA monitor readings  
16 for PM2.5, 24-hour.  
17 MS. ADELMAN: Thank you.  
18 MR. GROSSMAN: Okay.  
19 BY MS. CORDRY:  
20 Q Okay. So, in fact -- and, again, these are  
21 primarily there so that you can just, these can be checked  
22 against the 2013 numbers on the compilation sheet, which are  
23 what -- the only thing that's changed from when these kind  
24 of exhibits went in as 364, hard to believe, or 346, can't  
25 remember what it, which one it was, but -- hold on. It went

Page 151

1 in originally as, yes, it went in originally as 364, and we  
2 are now at 564 with the updated version through 2013.  
3 MR. GROSSMAN: Okay. So?  
4 BY MS. CORDRY:  
5 Q Okay. So just looking at the ones that are  
6 labeled 565 --  
7 MR. GROSSMAN: 5, yes.  
8 BY MS. CORDRY:  
9 Q -- do you recognize this kind of printout,  
10 Mr. Sullivan?  
11 A I do.  
12 Q This is taken when you do a direct download from  
13 the EPA website?  
14 A Looks like air data.  
15 Q Okay. So this does not involve any manipulation;  
16 this is just a direct printout of the website numbers?  
17 A Appears to be.  
18 Q Okay. All right. So if the numbers on these  
19 charts match the numbers on 565, then we have the correct --  
20 MR. GOECKE: The numbers on what charts?  
21 MS. CORDRY: 564 --  
22 THE WITNESS: 564.  
23 MS. CORDRY: -- the ones we just put in, the  
24 compilation charts.  
25 MR. GROSSMAN: So you're trying to authenticate --

Page 152

1 MS. CORDRY: Yes.  
2 MR. GROSSMAN: -- 564 by referring to the numbers  
3 from 565?  
4 MS. CORDRY: Yes.  
5 MR. GROSSMAN: I see.  
6 MR. GOECKE: Again, I think this would be better  
7 served by Ms. Cordry's testimony. Mr. Sullivan doesn't know  
8 what she has or has not done.  
9 MR. GROSSMAN: And just in fairness to him, I  
10 understand that, conceptually, you're saying that the  
11 readouts in 565 confirm or are reflected in your summary in  
12 564 exhibits, and he may be able to answer that, although,  
13 in fairness, he hasn't had much time to look at it. So --  
14 MS. CORDRY: All right. I --  
15 MR. GROSSMAN: Can you answer that now,  
16 conceptually, or is that something you'd need more time  
17 to --  
18 THE WITNESS: Conceptually, to say that's -- to  
19 confirm that 564 is correct relative to 565?  
20 MR. GROSSMAN: No, not that necessarily it's  
21 correct -- I realize you haven't done a side-by-side -- but  
22 that the idea that she's getting across is that the EPA  
23 monitor readings in 565 are then reflected or would be  
24 reflected in the data that she's provided in 564, not  
25 necessarily that the numbers are correct.

Page 153

1 THE WITNESS: If I understand correctly, 565 would  
2 be an appropriate basis for 564.  
3 MR. GROSSMAN: Yes, I think that's what she's  
4 saying.  
5 THE WITNESS: Right, agree.  
6 MR. GROSSMAN: Okay.  
7 BY MS. CORDRY:  
8 Q I mean, if we want, just to do a very quick part,  
9 the last three numbers, if you go to page 2 --  
10 MR. GROSSMAN: No, let's not do the -- we're not  
11 going to do the math while he's on the stand. I just --  
12 MS. CORDRY: All right. No, it's not the math.  
13 I'm just -- there are three numbers on the second page here  
14 and three numbers at the bottom that you could confirm if  
15 you want.  
16 MR. GROSSMAN: Well, when you do your --  
17 MS. CORDRY: Well, I --  
18 MR. GROSSMAN: -- direct -- what's the point?  
19 MS. CORDRY: Okay.  
20 MR. GROSSMAN: You can't testify as a witness now.  
21 You're just examining the witness. So --  
22 BY MS. CORDRY:  
23 Q If you look at the last page in 565, which is the  
24 sheet that has the Virginia NO2 numbers.  
25 A Okay.

Page 154

1 Q And that does have that Richmond site that you  
2 mentioned?  
3 A It does.  
4 Q Okay. And that's showing that the 98th percentile  
5 is 46 parts per billion?  
6 A You mean it shows it on the chart.  
7 Q Yes. That's what it shows, correct, for Richmond?  
8 A Yes.  
9 Q Okay. And if you --  
10 MR. GROSSMAN: I'm sorry. Where is this?  
11 MS. CORDRY: That's the very last line on there.  
12 MR. GROSSMAN: Bryant Park?  
13 MS. CORDRY: Yes.  
14 MR. GROSSMAN: Okay. And that's -- well, I see  
15 different numbers, but I see 58, 46, 46, zero. What --  
16 MS. CORDRY: Right. So the --  
17 MR. GROSSMAN: -- what are you asking there?  
18 MS. CORDRY: -- it's the column that's labeled --  
19 MR. GROSSMAN: 98th Percentile?  
20 MS. CORDRY: -- 98th Percentile.  
21 MR. GROSSMAN: Forty-six, okay.  
22 MS. CORDRY: Right. Okay.  
23 BY MS. CORDRY:  
24 Q And that's the number that you multiplied by the  
25 1.88 to get the micrograms per meter cubed we used?

Page 155

1 A That's the correct conversion.  
2 Q And that's the number you multiplied to get the 86  
3 micrograms per meter cubed that you said last time was the  
4 value at Richmond?  
5 A Yes. Forty-six times 1.88 equals 86.  
6 Q Okay. All right. And last week was the first  
7 time you've ever mentioned Richmond as a monitoring site,  
8 correct?  
9 A I believe so.  
10 Q Okay. Is one reason for that because Richmond,  
11 the site was only set up in the middle of October last year?  
12 A It was a new -- it's a new site.  
13 Q Okay.  
14 A It's one of those sites that, as I understand it,  
15 is responding to EPA's need for near-road monitors.  
16 Q So that site only has about 10 weeks of data on  
17 this chart, is that correct?  
18 A Well, it has more data than that now, but --  
19 Q Well, I'm not asking that. I'm asking, on this  
20 chart and from that number, that's based on about 10 weeks'  
21 of data?  
22 A This is based upon 2174 hours, which is  
23 approximately one-quarter of a year.  
24 Q Okay. As opposed to all the rest, which have  
25 8500, 8600 readings, correct?

Page 156

1 A It's a quarter of a year.  
2 Q Okay. In fact, if you go to the website, isn't  
3 it, it didn't actually get put up until the middle of  
4 October; so it's not even quite a quarter of a year?  
5 A It's 2174 hours out of 8760 hours a year. We can  
6 do the math, but it's approximately a quarter of a year, and  
7 it's still running as of today. So there's more data as of  
8 now.  
9 Q Right. In EPA guidance, do they normally tell you  
10 to rely on monitors that have less than a year of data?  
11 A They do not for modeling purposes. I provided  
12 that number as a reference point, along with a couple of  
13 others. There's very limited data available right now in  
14 near-road monitors. It's a new program, and from talking to  
15 Mr. Krask, he mentioned to me that Richmond did have a  
16 monitor and it's one of the, one of the only ones nearby  
17 that has data at this point that's available.  
18 Q Right.  
19 A So, you know, I didn't try to mislead. I wasn't  
20 trying to say it was a full year. It's not. It certainly  
21 appears to be reasonably representative based upon comparing  
22 what's available here with the data from 2014. If you look  
23 at this average relative to other sites, it's really, most  
24 likely would be in line, is my judgment.  
25 Q Okay. And you haven't provided us any data with

Page 157

1 2014; you're just saying that right now. Okay.  
2 A I did it last night before I went to bed.  
3 Q Okay. Because last week, when you came up with  
4 this new site, you only told us about 2013.  
5 A Correct. I just, I just looked last night at 2014  
6 in response to getting your package.  
7 Q And doesn't the EPA normally require that you have  
8 at least three years of data from a site to use it in  
9 modeling?  
10 A Well, they do, but I wasn't using that in  
11 modeling. I was using it as an example.  
12 Q Okay. And if I understood your testimony last  
13 week, you said several times that you can't really expect  
14 the site here at Wheaton to be higher than this site, which  
15 is right by the expressway, correct?  
16 A I gave that as one -- I gave three examples. That  
17 was one of the three.  
18 Q I'm asking you about those three. Didn't you say  
19 several times --  
20 A I put it in context --  
21 Q -- that because this was near an expressway, you  
22 couldn't expect the Wheaton site to be higher than that?  
23 Correct?  
24 MR. GOECKE: Objection. Asked and answered.  
25 MS. CORDRY: Well, I'm trying to just --



Page 158

1 MR. GROSSMAN: I'm going to overrule it. Go  
2 ahead.  
3 THE WITNESS: In my judgment, a monitor located in  
4 close proximity to I-95 or the other two locations I  
5 mentioned, including Los Angeles, Port of Los Angeles,  
6 I-710, the concentrations at Wheaton are going to be lower  
7 than the concentrations next to those major roadways.  
8 That's my judgment.  
9 BY MS. CORDRY:  
10 Q Okay. Would you also expect concentrations in the  
11 residential area in D.C. to be lower than next to a highway?  
12 A It depends.  
13 Q In an area, say the Takoma area of Washington?  
14 A I'd have to look at a map and put it in context.  
15 It depends what the nearby roadways are, what the  
16 orientation of those roads are to those locations, what are  
17 the power plants nearby. I mean, you're asking a  
18 hypothetical -- needs a lot more information to answer.  
19 Q That's right. So you can't really judge too much  
20 just from the fact that this happens to be next to the road  
21 in Richmond, correct?  
22 A No. I mean, certainly, if we're talking about  
23 automobile impacts from I-95 or the roadway in Los Angeles,  
24 there's 190,000 vehicles, 32,000 of which are heavy-duty  
25 trucks; if they're 153 in LA there, it would, my expert

Page 159

1 judgment, it would be a lot lower than that in Wheaton from  
2 the ring road, University, and the gas queue.  
3 Q But, as we've also noticed, that you can have  
4 values in D.C. that are higher than that value next to I-95,  
5 correct?  
6 A I don't recall -- I haven't looked at that. I  
7 mean --  
8 Q Well --  
9 A -- it's certainly possible.  
10 Q -- when you look at 564(b) --  
11 MR. GROSSMAN: Let's, you know --  
12 MS. CORDRY: Well --  
13 MR. GROSSMAN: -- you're going over the same  
14 territory, really, again.  
15 MS. CORDRY: Well, I'm asking now to --  
16 MR. GROSSMAN: We understand there can be  
17 differences.  
18 MS. CORDRY: Okay. And that's --  
19 MR. GROSSMAN: You've covered this area. Just  
20 move along to something else.  
21 MS. CORDRY: Well, that is the point, that you  
22 can't assume that I-95 is somehow dispositive, that these  
23 are very fact-specific kind of issues.  
24 MR. GROSSMAN: He's already answered that. He  
25 said --

Page 160

1 MS. CORDRY: All right.  
2 MR. GROSSMAN: -- exactly that, but he said that  
3 it's a significant factor if you're right next to I-95.  
4 BY MS. CORDRY:  
5 Q I want to be sure if I understood one point. Did  
6 you say last time that you couldn't find any studies that  
7 actually showed emission levels on, on or very near the  
8 roadway that were at or above the NAAQS limits?  
9 A You said emission. Do you mean air quality  
10 concentrations, NO2.  
11 Q Yes. Yes. Yes.  
12 A I didn't -- when I looked at it, I didn't see any.  
13 Q Okay. All right. And I would now like to look a  
14 little bit at the PM2.5 monitors and what, where you're at  
15 with those and what you did. You did say Dr. Cole wanted  
16 you to use the highest monitor at Beltsville, correct?  
17 A That's my recollection, yes.  
18 Q Okay. And if we look at 564(a), that's the one  
19 that I have labeled at the bottom HU. The Beltsville is on  
20 the Howard University campus, is that correct?  
21 A That's correct.  
22 Q Okay.  
23 MR. GROSSMAN: I'm sorry. Am I looking at 564 or  
24 565? What am I looking in here?  
25 MS. CORDRY: 564(a).

Page 161

1 MR. GROSSMAN: 564(a). Hold on.  
2 BY MS. CORDRY:  
3 Q And when you did the protocol, you came up with a  
4 value of 12.1 originally, was the number you used for the  
5 background for PM2.5?  
6 A I believe that's correct.  
7 Q And if you look at that chart, that is the number  
8 for the Beltsville monitor there, that last Beltsville  
9 monitor on the page for 2010?  
10 A Correct, but I'd like to clarify, I didn't have  
11 much time to look at this, but this chart is wrong.  
12 Q Okay. What's wrong about it?  
13 A You're using this terminology of full-time and  
14 part-time sites. The, when you say -- I think what you mean  
15 when you say full-time, you mean reference method site, and  
16 part-time means a TEOM site, which says, Hourly Analysis.  
17 You seem to have mixed those up --  
18 Q Okay. Well, in the first place --  
19 A Let me finish. The --  
20 Q -- I'm using my --  
21 MR. GROSSMAN: Well, hold on. Let him finish  
22 his --  
23 MS. CORDRY: Okay. Okay. Well, he's --  
24 MR. GROSSMAN: Let him finish what he's saying.  
25 BY MS. CORDRY:

Page 162

1 Q Okay. Go ahead.  
2 A What is significant, the -- when you say full for  
3 the 12.1, that's a TEOM; that's not a full-time site. And  
4 the TEOM at that location was biased time.  
5 Q Mr. Sullivan, who told you that's a TEOM monitor?  
6 A Look at the records. Look at your own --  
7 Q I'm sorry?  
8 A -- look at your 565.  
9 Q I'm looking at 565.  
10 A And turn to, turn to where it talks about  
11 Block-Averaged Values on the second page --  
12 Q Yes.  
13 A -- of 560 --  
14 Q Yes.  
15 A -- I think it's 565 --  
16 Q Yes.  
17 A -- and look at Site 3 --  
18 Q Yes.  
19 A -- Howard University.  
20 Q Where does it say that's a TEOM model?  
21 A See where it says, Block-Averaged?  
22 Q I see it says, Block-Averaged. Where does that  
23 say it's a TEOM monitor?  
24 A I'm telling you that block-averaged refers to  
25 TEOMs because --

Page 163

1 Q Are there not other kinds of monitors --  
2 A -- because --  
3 Q -- that fall under that?  
4 A -- if you, if you refer to --  
5 MR. GROSSMAN: Hold on. Hold on.  
6 MR. GOECKE: Objection.  
7 MR. GROSSMAN: Let him finish before you --  
8 MS. CORDRY: Okay.  
9 THE WITNESS: If you refer to the number of  
10 observations there, do you see where it says, 350, 346, 323?  
11 BY MS. CORDRY:  
12 Q Yes. Yes.  
13 A That means pretty much every day they have a data  
14 point.  
15 Q Right.  
16 A If you turn to the previous page, you see numbers  
17 like 110, 120. Those are every three-day, every six-day  
18 reference method samples.  
19 Q Okay.  
20 A When they have 365 or so numbers, that's --  
21 they're taking hourly data points for each day and coming up  
22 with a daily average on that basis. So it's not a full --  
23 this Site 3 is a reference method, is a, is a TEOM, and it's  
24 high.  
25 Q Okay. Now, Mr. Sullivan, if you could stop for

Page 164

1 just a moment and let me ask the questions in a fashion --  
2 MR. GROSSMAN: Well, he's -- hold on a second. He  
3 has, he can answer the questions.  
4 MS. CORDRY: But he --  
5 MR. GROSSMAN: He's trying to answer your  
6 question. He thought, he feels there's an error, and he's  
7 explaining it. You don't have to lecture him. Just ask  
8 your -- if you think he's wrong --  
9 MS. CORDRY: Okay.  
10 MR. GROSSMAN: -- ask a question that will elicit  
11 that.  
12 BY MS. CORDRY:  
13 Q Okay. First off, my use of terminology here is  
14 simply my use of terminology, that I'm referring to certain  
15 things. So it's not wrong or right. It's just a  
16 description of things, okay? So when I said here, which I  
17 was going to say before you said all, when I say full, it  
18 means a monitor read essentially on a daily basis. That is  
19 in fact what you have just said about these ones that are  
20 labeled BLK monitors, that they are read on a daily --  
21 A No. You're --  
22 Q Okay.  
23 A Let me clarify. In the past, when you said  
24 full-time, you meant a monitor that was always operating,  
25 you had hourly data every day of the year; and, when you

Page 165

1 said part-time, you're referring to reference methods, which  
2 is basically taking a filter and putting a filter on like a  
3 vacuum cleaner, kind of, that sucks air through that filter  
4 for a day and you do pre- and post-weights to that filter.  
5 That's the reference method, but that's one data point every  
6 three or six days. So --  
7 Q I --  
8 A -- that's the terminology they've used, just to be  
9 clear, and I made it clear that when you say full-time,  
10 you're referring to a TEOM, which is a secondary method;  
11 when you say part-time, that is the gold-standard reference  
12 method.  
13 Q Okay. That's very true. I understand what you  
14 want to say about that, but my statement here was part-time  
15 means a monitor that's read on a periodic schedule, anywhere  
16 from once per three days to as little as once every 10 or 11  
17 days. Is there something untrue about that statement?  
18 A Correct, there is.  
19 Q And what is that?  
20 A The EPA on the reference method does sampling  
21 every three days or every six days. If it was once every 11  
22 days, there'd be a malfunction of the equipment. That's not  
23 standard.  
24 Q Well, if you look at the PM2.5 chart here, 565 --  
25 MR. GOECKE: Which 565?

Page 166

1 MS. CORDRY: 565(a).  
2 BY MS. CORDRY:  
3 Q And if you look at the second column there labeled  
4 OBS -- that's observations, correct?  
5 A Correct.  
6 Q That's the number of days that you have readings  
7 from?  
8 A Correct.  
9 Q Okay. If you go about halfway down there, you see  
10 one that's labeled 32.  
11 A Correct.  
12 Q Well, isn't 32 about once every 10 or 11 or maybe  
13 even 12 days out of 360?  
14 A What I'm saying, in my experience, collecting  
15 samples like this, it's always done on a three- or six-day  
16 basis. If it's this low, it is a partial year they had it  
17 operating or there's been a lot of malfunctions, but that's  
18 not the policy that I've ever seen, take a sample every 11  
19 days.  
20 Q Well, and two more down below that there's one  
21 labeled 50. So, again, that's --  
22 A Same answer.  
23 Q Okay. But you don't know that; you're just  
24 assuming that that's the problem?  
25 A I'm just stating how you could have less than the

Page 167

1 normal number of days.  
2 Q Okay.  
3 A I'm not, I'm not -- I don't know why it was low,  
4 but those are the kind of reasons that generally occur.  
5 Q Okay. But you don't know that for a fact; you're  
6 just assuming that, as a generality, that may happen?  
7 A I've answered that.  
8 MR. GROSSMAN: Ms. Cordry, when you use the term  
9 full, let's say in that first line -- and I think that the  
10 witness --  
11 MS. CORDRY: Yes.  
12 MR. GROSSMAN: -- said that that refers to a TEOM  
13 -- are you saying it does not refer to a TEOM monitor?  
14 MS. CORDRY: Okay. There's a couple of things.  
15 Number one, when I was using this, I was simply using full  
16 as a way to refer to a monitor that was read on, generally,  
17 every day, because if you'll notice, I use full on the first  
18 line there, where the 420 34th Street Northeast one.  
19 MR. GROSSMAN: Right.  
20 MS. CORDRY: And if you look at 565, there are 355  
21 observations listed there.  
22 MR. GROSSMAN: No, but I'm asking you, is that --  
23 do you disagree with Mr. Sullivan that that first line where  
24 you said full represents a TEOM monitor?  
25 MS. CORDRY: What I am saying is, when I said

Page 168

1 full, all I was saying for my own purposes in labeling this  
2 chart was to distinguish between monitors where there were  
3 readings virtually every day versus readings where there  
4 were not. Now, there's a different question that we get to  
5 about what kind of monitors were used for certain other  
6 aspects, and the three at the bottom there that I have  
7 broken off with a line there, they are listed separately on  
8 this chart, on page 2 of 565(a), as 24-hour BLK average.  
9 So, yes, there is something different about those three.  
10 MR. GROSSMAN: But you don't think that the first  
11 one listed, the 420 34th Street Northeast, where you said  
12 full, you don't think that that's a TEOM monitor?  
13 MS. CORDRY: I don't believe so, no. I mean,  
14 there are a number of monitors. There's another monitor  
15 there, also, at Telegraph Road that is also listed as 352  
16 observations a year. Actually, there's three of them  
17 actually on this chart at 565. There is the 420 34th  
18 Street, which has 355 observations; there is the 2500 1st  
19 Street Northwest, which has 358 --  
20 MR. GROSSMAN: Right, and Telegraph Road.  
21 MS. CORDRY: -- and Telegraph Road.  
22 MR. GROSSMAN: And you don't think that any of  
23 those are TEOM monitors that you're referencing?  
24 MS. CORDRY: I'm not really sure because I didn't  
25 try to go into there and deal with what each particular

Page 169

1 monitor is. I can actually probably find out because I have  
2 some information from those, but what I will --  
3 THE WITNESS: Well, to clarify --  
4 MR. GROSSMAN: All right. Well, you seem to have  
5 taken umbrage when --  
6 MS. CORDRY: Well, I'm --  
7 MR. GROSSMAN: -- Mr. Sullivan said it was a TEOM.  
8 MS. CORDRY: Well, I am because I'm going to get  
9 to the question. I don't know about all of them. What I do  
10 know about is at Beltsville.  
11 BY MS. CORDRY:  
12 Q Who told you this was a TEOM monitor, in  
13 particular?  
14 A EPA's web page.  
15 Q And does a Maryland site say that?  
16 A What I'm saying, Ms. Cordry -- you can check  
17 yourself -- that Site, Monitor Site 3 in Beltsville is a  
18 TEOM --  
19 Q Okay.  
20 A -- monitoring Sites 1 and 2, a reference method --  
21 Q Let me ask you --  
22 A -- and one of the sites, Site No. 2, I believe it  
23 is, is a duplicate site where they don't appear to do every  
24 six days, as you mentioned.  
25 Q Let me ask it a different way. Are TEOM monitors

Page 170

1 the only kind of monitors that are read on a daily basis?  
2 A No. I mean, to clarify, I have seen cases where  
3 they will take daily reference methods. In a special case,  
4 they will do that: somebody goes out every day and changes  
5 that filter. It's unusual, but I've seen it done.  
6 Q Are there other kind of monitors, besides TEOM  
7 monitors and daily reference methods, that are read on a  
8 daily basis?  
9 A That are read on a daily basis?  
10 MR. GROSSMAN: You mean other EPA background  
11 monitors or other --  
12 MS. CORDRY: Yes.  
13 MR. GROSSMAN: -- anybody?  
14 MS. CORDRY: Yes. Yes.  
15 MR. GROSSMAN: Other EPA background monitors?  
16 MS. CORDRY: Reading these NO2.  
17 THE WITNESS: You're referring to composite,  
18 24-hour, like a filter? I'm not following your question  
19 exactly.  
20 BY MS. CORDRY:  
21 Q Well, I'm saying, TEOM is a particular kind of a  
22 monitor, is it not?  
23 A It is.  
24 Q There are other kind of monitors that read on a  
25 24-hour basis, continuous basis?

Page 171

1 A Sure.  
2 Q And who told you that this monitor was a TEOM  
3 monitor?  
4 MR. GOECKE: Asked and answered.  
5 MR. GROSSMAN: Right. I --  
6 THE WITNESS: Yeah, I've answered that question.  
7 MS. CORDRY: No, it hasn't because he's -- he has  
8 not yet told me this because he's -- okay.  
9 THE WITNESS: Well, refer to --  
10 MR. GROSSMAN: I thought he just said he got it  
11 from the EPA --  
12 MR. GOECKE: He said the EPA website.  
13 MS. CORDRY: Okay.  
14 BY MS. CORDRY:  
15 Q Well, what I'm saying is, are you sure there are  
16 no other kind of monitors -- let me -- okay.  
17 A For particulates?  
18 Q All right. Let me ask you a different way. The  
19 State of Maryland does not use TEOM monitors. Do you know  
20 that?  
21 A I didn't -- I don't know. I didn't check that.  
22 Q Okay. That was really my question. If you had  
23 asked Mr. Krask what kind of monitor was used there, what  
24 would he have told you?  
25 MR. GOECKE: Objection. Speculative.

Page 172

1 MR. GROSSMAN: Yes. I'm going to sustain that.  
2 MS. CORDRY: Okay. Then I'll put it a different  
3 way. Let me just to do this rather than try to go at it the  
4 other way.  
5 MR. GROSSMAN: Thank you. Is this to be marked as  
6 an exhibit?  
7 MS. CORDRY: Sure.  
8 MS. ADELMAN: Do you have extras, Karen?  
9 MS. CORDRY: Yes.  
10 MR. GOECKE: Karen, is this a new document or is  
11 this something we've gotten before?  
12 MS. CORDRY: This is a new one because I didn't  
13 realize we were going to have this problem, but I thought  
14 I'd have it in case.  
15 MR. GROSSMAN: I don't know what that means.  
16 MR. GOECKE: I don't know what that means either,  
17 but --  
18 MS. CORDRY: What it means is I thought that --  
19 MR. GOECKE: -- what I do know it means is it,  
20 once again, violates the 10-day rule.  
21 MS. CORDRY: Well --  
22 MR. SILVERMAN: It's cross-examination.  
23 MS. CORDRY: This is --  
24 THE WITNESS: What I clarified, EPA's web page, my  
25 understanding was it was a TEOM --

Page 173

1 BY MS. CORDRY:  
2 Q And what web page --  
3 A -- but this I haven't seen before. So, I mean --  
4 Q What web page is that?  
5 A -- I can't evaluate it on the stand, but -- I  
6 don't recall. I remember looking at EPA's web page, and our  
7 conclusion was it was TEOM.  
8 Q Well, you said your conclusion was because it said  
9 it was a BLK monitor, and you deduced from that that it was  
10 a TEOM monitor, correct?  
11 A Because BLK typically means you're taking hourly  
12 values and, if you have less than 24 in a day, for example,  
13 you divide by how many days you had. If you have a, if you  
14 have a 24-hour sample, it's not typical that I've seen to  
15 refer to it that way.  
16 Q Well, there are other kind of monitors besides  
17 TEOM monitors, are there not, that take those kind of daily  
18 readings?  
19 A I'm sure there are. I haven't, I haven't had  
20 experience in the field with them. My main point,  
21 Ms. Cordry, there's three monitors in Beltsville -- we can  
22 go a long time about this -- there's three monitors, two of  
23 which are in agreement with each other and one that is way  
24 higher than the other two, and standard monitoring practice  
25 is you don't rely on outliers. And that one location, that

Page 174

1 one sample, Site 3 at Beltsville, is an outlier --  
2 Q Okay.  
3 A -- whether it be a TEOM or whatever it is, it's  
4 clearly an outlier.  
5 Q So according to Mr. Krask, who I did ask yesterday  
6 and which is --  
7 MR. GROSSMAN: Well, no, no, no.  
8 MS. CORDRY: Well, wait a minute. You let him do  
9 hearsay. I'm going to do hearsay as well.  
10 MR. GROSSMAN: Wait, wait, wait, wait. He's a  
11 witness here, and when you're testifying under oath, you can  
12 testify to the extent that it is permissible --  
13 MS. CORDRY: All right.  
14 MR. GROSSMAN: -- we'll see --  
15 MS. CORDRY: All right. Well, then let me ask the  
16 question that way.  
17 MR. GROSSMAN: -- and then subject to objection,  
18 but you can't just testify --  
19 MS. CORDRY: All right. Then let me ask --  
20 MR. GROSSMAN: -- from the, as an attorney  
21 questioning a witness.  
22 MS. CORDRY: Let me ask the question that way.  
23 BY MS. CORDRY:  
24 Q If Mr. Krask would state that this is not a TEOM  
25 monitor, it is a BAM Monitor A -- beta-attenuation mass

Page 175

1 monitor I think that stands for -- would that surprise you?  
2 A It wouldn't. It's also an hourly value that would  
3 be block averaged, and it's not the gold standard. In other  
4 words, if you have a BAM -- you can ask Mr. Krask this  
5 question yourself -- if you have a BAM or a TEOM side by  
6 side with two reference monitors and the two reference,  
7 reference method monitors match and that BAM is out in left  
8 field, you're not going to rely upon that data set. And to  
9 give you an example, I mean, if you want to bring that point  
10 up, if we look at 2012 as an example, we have two  
11 gold-standard methods that show an annual average of 8.5 and  
12 8.3, but if you look at what I call the TEOM, may be a BAM,  
13 that's showing 11.3 compared to 8.5 and 8.3. What are you  
14 going to believe?  
15 Q Well, before you go asking about all of this, how  
16 about staying with my question, which is, you now agree,  
17 apparently, I think, that this is perhaps not actually a  
18 TEOM monitor, it's actually a different kind of monitor,  
19 correct?  
20 A I will confirm with Mr. Krask. I'll take your  
21 word for it for now, but my point was the BAM and the TEOM  
22 are two equivalent methods; they're not a reference method.  
23 And so my point I made, if it's the TEOM or BAM doesn't  
24 matter; they're not reference gold-standard methods.  
25 Q Do you know if this monitor has been certified as

Page 176

1 a federal equivalent monitor?  
2 A Well, it could be. I know that TEOMs are, but the  
3 equivalent is not, is not the same as a reference method.  
4 If there's a disagreement, you rely upon what EPA calls the  
5 gold standard, which is the reference method itself.  
6 Q And in terms of, if you were trying to get a  
7 single yearly value from this site for the annual number --  
8 you did some averaging here of sites -- is there a way that  
9 you were supposed to put these different monitors together  
10 to get the yearly average?  
11 A We, we initially -- and it was a compromise to  
12 Dr. Cole's position -- we used that, that hourly monitor.  
13 We did average all three. In the more recent analysis, we  
14 used the two monitors together as a basis to show the  
15 differences.  
16 Q I'm sorry. When did --  
17 MR. GROSSMAN: You mean the two reference  
18 monitors?  
19 THE WITNESS: Right.  
20 BY MS. CORDRY:  
21 Q When did you average all three?  
22 A My recollection, the 2012 report we did.  
23 Q The November 2012 report?  
24 A Correct.  
25 Q Doesn't that report use the 12.1 number only?

Page 177

1 A Well, you probably are correct. When we showed  
2 the trends before, we used all three. I recall that, but  
3 yeah, previously used the highest value.  
4 Q And when you did those trends, you were just doing  
5 that as a point of comparison, just to show how conservative  
6 you were?  
7 A We were showing the trends. I don't, I don't  
8 recall off the top of my head -- the 12.1, was that -- which  
9 of the Beltsville sites we used. I don't know. I don't  
10 recall.  
11 Q Well, the chart is there.  
12 A I'm saying I don't recall.  
13 Q Well, the 12.1 is the number shown for 2010 for  
14 Beltsville and that's --  
15 A If it's based upon the hourly monitor --  
16 Q Yes.  
17 A -- it's extremely conservative.  
18 Q Okay. And that's what you agreed to use in the  
19 protocol?  
20 A Well, that's what's in the protocol.  
21 Q Right. And that was after Dr. Cole asked you to  
22 do that and you agreed to that?  
23 A Well, I mean, for context, obviously the standard  
24 changed in what, January of 2013, and the approach of using  
25 an extremely conservative value was not, was not appropriate

Page 178

1 at that point in time. And in response to Parks and  
2 Planning staff and our judgment, we provided an EPA  
3 methodology, averages appropriate for that point in time.  
4 It changed.  
5 Q But you didn't discuss that or get any agreement  
6 with Dr. Cole about changing that, correct?  
7 A We did not seek to have another protocol  
8 discussion.  
9 Q Okay. And if you kept the same number from that  
10 single monitor, even with the three-year averages, you still  
11 stay above -- you stay as high as 11.73 out through 2012, is  
12 that correct?  
13 A The math will be relevant because what I've  
14 testified to is, after that report in November 2012, I  
15 evaluated those, looked at those three monitoring sites and  
16 realized that that one site was not a reference method site  
17 and I plotted over a function of time and that site drifted.  
18 Initially it was reasonable, and that site drifted way high,  
19 as the example I gave you in 2012. That occurred in 2011 as  
20 well. It just drifted high. I don't know why, what kind of  
21 malfunction it had --  
22 MR. GROSSMAN: When you say that site, you mean  
23 that particular, single, non-reference monitor?  
24 THE WITNESS: Correct, that that one drifted  
25 relative to the other two. At that point in time, my

Page 179

1 conclusion was it was inappropriate to use that one. When I  
2 have two reference method there that are in agreement, I'm  
3 not going to use that one that's way out there and not  
4 representative.  
5 BY MS. CORDRY:  
6 Q Those sites are checked and reviewed and quality  
7 assurance by the state, are they not?  
8 A They are, I'm sure, to some extent.  
9 Q All the monitors are, are they not?  
10 A I'm sure that they are, but I'm telling you, in my  
11 judgment -- you're asking my opinion -- in my judgment, from  
12 doing monitoring programs --  
13 Q Actually, I didn't ask your opinion.  
14 A Well, all right, I'll stop.  
15 Q I asked you --  
16 MR. GROSSMAN: Yes.  
17 MS. CORDRY: I asked him a fact: Are those sites  
18 quality assured and reviewed and monitored by the state?  
19 THE WITNESS: Well, but the -- I wanted to give  
20 you an answer that wouldn't be misleading. My point was  
21 that yes, they do go through a quality control procedure but  
22 sometimes a state that does that will have a monitor that's  
23 not working correctly, whether it be an air quality or a  
24 meteorological sensor. So does that mean they're all right?  
25 It doesn't, and if they have two reference methods there,

Page 180

1 they're going to rely upon those reference methods much more  
2 than the, the BAM, if that's what it is.  
3 BY MS. CORDRY:  
4 Q Okay. Not the TEOM, which you've now told us  
5 repeatedly you thought it was but it turns out it's not?  
6 MR. GROSSMAN: All right. No, you don't --  
7 MS. CORDRY: Okay.  
8 MR. GROSSMAN: -- need to run over that again. We  
9 understand.  
10 MS. CORDRY: Okay.  
11 BY MS. CORDRY:  
12 Q And in all this quality assurance, they never  
13 changed these numbers, correct, for that monitor?  
14 A My recollection is they're closer now than they  
15 were back in that period of time when I said there's a  
16 tremendous amount of drift. It's still higher, but if you  
17 look at the data you provided earlier, they're more in the  
18 same ballpark, where the BAM is showing 9.5 in 2013 and the  
19 reference method monitors are showing -- let me find them  
20 again here -- Beltsville, 7.8 versus 8.2. So it's still  
21 high but not as high as it was before.  
22 Q Okay. But they've never changed the data that was  
23 there before?  
24 MR. GROSSMAN: Let me ask you this, Ms. Cordry: I  
25 mean --

Page 181

1 MS. CORDRY: Okay.  
2 MR. GROSSMAN: -- I guess the angle you're headed  
3 to is that somehow the BAM readings, if that's what it is,  
4 should be considered in or at least averaged together with  
5 the other two readings --  
6 MS. CORDRY: Right.  
7 MR. GROSSMAN: -- to get, to get, to plug into the  
8 model. Is that what you're suggesting?  
9 MS. CORDRY: I'm getting there, because the next  
10 question was going to be --  
11 MR. GROSSMAN: Well, I'm getting there before you.  
12 So --  
13 MS. CORDRY: Okay. Okay.  
14 MR. GROSSMAN: -- answer my question.  
15 MS. CORDRY: Okay. Yes, I -- well, actually, no.  
16 My point is that the protocol had been that we were going to  
17 use the highest single monitor there and that that, again,  
18 part of the point is that -- I mean, I think it agrees, in a  
19 sense. If the conservatism keeps changing, his model gets  
20 less and less and less conservative all the way --  
21 MR. GROSSMAN: I understand. I've --  
22 MS. CORDRY: Okay.  
23 MR. GROSSMAN: -- seen that happen, but --  
24 MS. CORDRY: All right.  
25 MR. GROSSMAN: -- and you can attribute whatever

Page 182

1 motives you want to that -- but I've watched that occur as  
2 we've gone along --  
3 MS. CORDRY: Okay.  
4 MR. GROSSMAN: -- and I'm not all that concerned  
5 about the protocol issue because he's not required to follow  
6 the protocol that was, you know, was originally discussed  
7 and he can change as he wants and then I can evaluate  
8 whether that change makes sense. So --  
9 MS. CORDRY: Okay.  
10 MR. GROSSMAN: -- that's not my -- I'm trying to  
11 find out --  
12 MS. CORDRY: Okay.  
13 MR. GROSSMAN: -- from you, is it your contention  
14 that the BAM monitor, if that's what it is, should have been  
15 averaged in or should be averaged in with the other two  
16 reference monitors to get the appropriate modeling?  
17 MS. CORDRY: At the very least, it needs to be  
18 averaged in. I don't concede that we should use the  
19 average, and my next question to him was going to be, how  
20 was he doing these averages that he is starting to use.  
21 MR. GROSSMAN: All right. You say at the very  
22 least. So you would have the highest -- well, you would  
23 have the BAM measurement used in lieu of the reference  
24 monitors; is that what you're suggesting?  
25 MS. CORDRY: Well, I would note that, again, going

Page 183

1 back to the chart, that this number is not necessarily, when  
2 you look at other models that were using this 24-hour block  
3 method, it's not necessarily particularly out of line with  
4 those; that, again, this goes back to this question of  
5 should you be looking at anything else.  
6 If you look at the chart, for instance, for 2012,  
7 those three monitors were 11.6, First Street Northeast in  
8 D.C., 10.3 in Rockville, and 11.3 in Beltsville -- so that  
9 monitor is right in line with those other three monitors --  
10 that for 2013, the 2500 First Street monitor is still at  
11 11.6. So it's not at all clear to me that this is  
12 necessarily completely out of line, but if we talk about  
13 using the highest monitor -- and we will come back to the  
14 EPA rule in just a moment, you know, what you should be  
15 doing this --  
16 MR. GROSSMAN: Excuse me, but you complained about  
17 the witness not answering your question directly.  
18 MS. CORDRY: Okay.  
19 MR. GROSSMAN: I asked you whether or not it's  
20 your contention that the modeling should use only the BAM  
21 figure, if that's what it is, and you've now gone on to a --  
22 MS. CORDRY: Okay. All right.  
23 MR. GROSSMAN: -- whole justification. I'm asking  
24 you if that's your -- is that your contention?  
25 MS. CORDRY: I think our contention is that yes,

Page 184

1 it is a reasonable approach to continue using the same  
2 monitor you used before and that that monitor is not  
3 necessarily out of line when looking at the other data, yes.  
4 MR. GROSSMAN: All right. So you believe that the  
5 highest reading should be used as opposed to an average or  
6 excluding that BAM monitor because it disagrees with the  
7 reference monitors?  
8 MS. CORDRY: I think that that is a reasonable  
9 approach and that certainly that's one approach we should  
10 use, and part of this is also going back to -- that is  
11 something that I said in the background memo, which  
12 Mr. Sullivan said he disagreed with. So part of this was to  
13 just kind of clarify that in fact what I was laying out in  
14 the background memo was a series of alternative approaches  
15 and what the effect would be if you used those alternative  
16 approaches.  
17 MR. GROSSMAN: Mr. Sullivan testified that the  
18 gold standard, EPA's gold standard is the reference  
19 monitors. Do you or your witnesses disagree with that?  
20 MS. CORDRY: I think that's probably, that is the  
21 reference model. I think the point of labeling something as  
22 a federal equivalent monitor is also intending to show that  
23 it has been certified to also read appropriately.  
24 MR. GROSSMAN: Well, is Dr. Cole going to testify  
25 that if you have a reading from a BAM monitor that's

Page 185

1 considerably different from the reference monitors, that you  
2 should nevertheless take that reading in lieu of the  
3 reference monitors in view of what appears to be conceded,  
4 that that's the EPA -- the reference monitors are the EPA  
5 gold standard?  
6 MS. CORDRY: Well, I'm going to have to wait and  
7 find out exactly what he wants to testify, but --  
8 MR. GROSSMAN: All right. Well, you might have  
9 him address that point because I am a little concerned. I  
10 mean, you pressed the witness significantly on this point  
11 and I understand your point, but his testimony is that there  
12 appears perhaps to be a problem with that BAM monitor but,  
13 in any event, the EPA standard is the reference monitors and  
14 there are two of them there and in modeling you would  
15 eliminate the outlier, which in this case is that BAM  
16 monitor. So I'd like to know from Dr. Cole, when he  
17 testifies, if he disagrees with that as a matter of  
18 following EPA guidelines.  
19 MS. CORDRY: Okay. Well, in the first --  
20 MR. GROSSMAN: I'm not as concerned --  
21 MS. CORDRY: Okay.  
22 MR. GROSSMAN: -- with what you think about it.  
23 MS. CORDRY: Right. Well, I'm actually going to  
24 ask him a question, based on my discussions with Mr. Krask  
25 yesterday, about how you do this. Part of the reason why I

Page 186

1 asked him the question about the state monitors, reviews the  
2 data, has not thrown the data out, so that -- and that it's  
3 been labeled as a federal equivalent monitor -- so I don't  
4 think we necessarily assume that there's something wrong  
5 with this other than the fact that it's reading high. That  
6 does not necessarily mean it's wrong, and I'm going to ask  
7 him a question in just a minute as to some other reasons  
8 about --  
9 MR. GROSSMAN: Well, when you put on Dr. Cole, you  
10 can ask him that. I mean, I don't know how much time you  
11 need to waste on --  
12 MS. CORDRY: Okay.  
13 MR. GROSSMAN: -- going over the same territory  
14 with Mr. Sullivan. He's already made his position on this  
15 very clear --  
16 MS. CORDRY: Okay.  
17 MR. GROSSMAN: -- and I think I've restated it  
18 correctly. Have I not, Mr. Sullivan?  
19 THE WITNESS: You have.  
20 MR. GROSSMAN: Okay.  
21 MS. CORDRY: Okay.  
22 BY MS. CORDRY:  
23 Q When you did the averaging that you did in the  
24 charts in January where you were showing that trend line,  
25 how did you do the average? What did you --

Page 187

1 A My --  
2 Q -- what exactly did you average?  
3 A My recollection is we averaged Sites 1 and 2 --  
4 Q Okay. So --  
5 A -- which are the two reference method sites.  
6 Q You don't think at that point you had any input  
7 from the, from the other site at all?  
8 MR. GROSSMAN: What's the other site? The BAM  
9 monitor?  
10 BY MS. CORDRY:  
11 Q I mean, the other monitor, the BAM monitor.  
12 A No. As I testified, I mean, these three -- I  
13 haven't seen this site, but the way they were almost always  
14 set up, the three monitors are side by side. They're in the  
15 same spot. We're not comparing it to Washington, D.C., or  
16 any place else. They're right there next to each other. We  
17 have two that agree and one that's nowhere near agreeing.  
18 The standard practice is to use the ones that are reference  
19 methods that agree.  
20 Q And on those sites we, again, we agree that  
21 looking at -- and I don't have all the observations for all  
22 of them, but I think the numbers on the other ones are  
23 relatively similar -- looking at 2013, one of those, as we  
24 agreed, read every third day and the other one read only 32  
25 times in the course of a year, correct?

Page 188

1 A Yeah, and just to clarify, I confirm that 2012 was  
2 similar. It appears that that monitor, one of which is a  
3 duplicate, which would be Site No. 2 in Beltsville, they're  
4 not running that every six or 12 days. They're running it  
5 less frequently.  
6 Q Okay.  
7 A Correct.  
8 Q Okay. And the one page that I printed out from  
9 that much bigger chart that you had -- this one like this,  
10 and I gave you the one page that was just the first part of  
11 that. I'm trying to find it. My only question there is, it  
12 does show that the monitor values differ quite  
13 substantially, often, from day to day, correct?  
14 A I don't recall. I mean --  
15 Q Well -- all right.  
16 A -- is it somewhere? Where do I find that  
17 document?  
18 Q Okay. Well, that, just look at the front page of  
19 that and just --  
20 MR. GOECKE: And this is 564(e)?  
21 MS. CORDRY: Yes, for Beltsville.  
22 BY MS. CORDRY:  
23 Q Look at the sheet for Beltsville.  
24 MR. GOECKE: Which page are we on? 564(e)?  
25 MS. CORDRY: Yes. Actually, what we want is, what

Page 189

1 we want is the page for Beltsville in regard --  
2 THE WITNESS: Well, my experience in monitoring,  
3 especially after an annual average, is certainly there's  
4 some uncertainty in each measurement and you'll get  
5 variation day by day between two duplicates. That's not  
6 unusual, but over the course of a year, you know, they're  
7 going to give you fairly similar results, which they did.  
8 BY MS. CORDRY:  
9 Q Okay. So my question to you again was that the  
10 numbers do, yes, they do vary quite a bit from day to day;  
11 it may be very high one day and then drop off quite a bit  
12 the next day?  
13 A I haven't analyzed this, I mean, Ms. Cordry. I  
14 haven't had a chance to really review this in detail, but  
15 what I'm saying, in principle, that -- that certainly is  
16 what usually happens: you'll get variability from day to  
17 day for various reasons.  
18 Q So that if you have a monitor that reads every  
19 third day, it's not taking readings two out of these three  
20 days, obviously; you're only get a third of the readings for  
21 the whole year, correct?  
22 A That's correct.  
23 Q Okay. And just as a matter of general statistics  
24 and general practice, if you have a set of values that can  
25 vary quite widely and one of your readings takes every day



1 and one takes a third of the day, there's possibility for  
 2 the two reason readings not to match up, correct?  
 3 A Well, sure, on a day-by-day basis, they may not  
 4 match up.  
 5 Q Well, no, I'm talking about overall, on the  
 6 average.  
 7 A Well, then it depends. It depends how big your  
 8 sample size is. If you had 30, 40, 50 samples over the  
 9 course of a year, that's probably pretty representative of  
 10 the year; if you had 10 samples, probably not.  
 11 Q On something like this where it varies over a wide  
 12 range of values, it can never get lower than zero but the  
 13 top number can go quite high, correct?  
 14 A It can't go lower than zero. The top number can  
 15 go whatever it's going to go to.  
 16 Q So if you're averaging something and you were  
 17 missing some values, there may be an equal chance of missing  
 18 a low value or a high value but the high value can be much  
 19 higher than the average than the low value can be --  
 20 MR. GROSSMAN: Really, Ms. Cordry, I think I know  
 21 where you're going with this --  
 22 MS. CORDRY: Yes.  
 23 MR. GROSSMAN: -- but really, you're asking --  
 24 you're really not going to ask me to enter an opinion based  
 25 on a speculation about whether or not statistically these

1 monitors, the reference monitors, are representative, are  
 2 you? I mean --  
 3 MS. CORDRY: Well, what I am going to --  
 4 MR. GROSSMAN: -- is that, is that where you're  
 5 going with this?  
 6 MS. CORDRY: Well, what I am going to say is that  
 7 one, at least one explanation of part of the difference here  
 8 is that one is reading every day and one is not. So one is  
 9 getting two-thirds of the values --  
 10 MR. GROSSMAN: And you're saying that --  
 11 MS. CORDRY: -- or missing two-thirds of the  
 12 values and the other one isn't.  
 13 MR. GROSSMAN: -- that the BAM is reading every  
 14 day --  
 15 MS. CORDRY: Yes.  
 16 MR. GROSSMAN: -- but the representative one is --  
 17 but the reference one, or one of the reference ones at  
 18 least --  
 19 MS. CORDRY: Is reading, at most, every third day,  
 20 and the other one is reading, as we said, every 10th day or  
 21 11th day or 12th day or so. So that it's clearly, you're  
 22 missing a lot of values for the reference monitors.  
 23 MR. GROSSMAN: But let's say, let's say you're  
 24 right in that there's some potential issue with that  
 25 statistically, there could be some more aberration. If the

1 EPA says that the reference monitors are the gold standard  
 2 to be used, how could I not follow that?  
 3 MS. CORDRY: Well, we don't actually have anything  
 4 from the EPA at this point saying that. So --  
 5 MR. GROSSMAN: No, I know, but I'm saying, you're  
 6 going to ask Dr. Cole that and, if he confirms that, how  
 7 could I not follow that? How could I just assume I'm using  
 8 the BAM reference point as opposed to the gold standard if  
 9 this expert witness says that's what the EPA says?  
 10 BY MS. CORDRY:  
 11 Q Well, then if Mr. -- let me ask it this way: If  
 12 Mr. Krask says that the way they get to their yearly number  
 13 is that they take the number from the reference monitor --  
 14 that No. 1, that federal reference monitor -- for the days  
 15 that it reads and they take the numbers from the BAM monitor  
 16 for the days that it reads, where the federal reference  
 17 monitor is not being used, and that's what they combine,  
 18 would that surprise you?  
 19 A It would, because that would, to me, wouldn't make  
 20 -- wouldn't be appropriate, especially in a situation here  
 21 where two issues. One is the EPA does call it the gold  
 22 standard, and I can put this into evidence if you want to  
 23 see that, the reference about it is the gold standard; and,  
 24 if you have a situation where we have 120 observations per  
 25 year, 120 days per year to represent a year --

1 statistically, that's a very large data set -- that that  
 2 would certainly trump the fact, if you average in the days,  
 3 the extra days from the BAM, the BAM is going to provide  
 4 bias, and so to me, that, I would, I would not, I would not  
 5 do that.  
 6 Q Well, assuming --  
 7 MR. GROSSMAN: Mr. Sullivan, what is the reference  
 8 to the gold standard? What page are you reading from what?  
 9 THE WITNESS: I'm reading from EPA's web page,  
 10 and --  
 11 MS. CORDRY: Which we haven't been furnished with  
 12 either. Okay.  
 13 THE WITNESS: Well, it's, you brought up the  
 14 point. So --  
 15 MR. GROSSMAN: Well, it came up in his testimony.  
 16 So --  
 17 MS. CORDRY: Okay.  
 18 THE WITNESS: You can do a search for EPA  
 19 reference method gold standard. It takes you to web page  
 20 www.epa.gov/heads/research/frm\_fem.html, and EPA states that  
 21 National Ambient Air Quality Standards, FRMs are the gold  
 22 standard of air pollution monitoring systems and ensure air  
 23 quality data collected at different sites are accurate and  
 24 can be used for purposes of intercomparison.  
 25 BY MS. CORDRY:

Page 194

1 Q Okay. And what does that say about FEM monitors?  
2 A Well, they're not the gold standard; so it would  
3 say they weren't as reliable or accurate.  
4 Q Does it say that?  
5 A I read what -- I read what it said.  
6 Q Okay. So we'll find out later what EPA says about  
7 FEMs, but in any case, regardless of whether you think  
8 that's the way to do it or not, if Mr. Krask says that that  
9 is in fact what they do, then they are counting that BAM  
10 monitor, are they not?  
11 MR. GOECKE: Objection. Speculative.  
12 MS. CORDRY: Well, it's not speculative. I'm  
13 asking him that question.  
14 MR. GROSSMAN: No, I understand. He has said he  
15 doesn't think it's an appropriate method, and you have said  
16 this is -- if they are doing it, they are doing it. I mean,  
17 isn't that tautological? You're saying --  
18 MS. CORDRY: Well --  
19 MR. GROSSMAN: -- you're saying, this is what  
20 Mr. Krask told you; so --  
21 MS. CORDRY: Yes.  
22 MR. GROSSMAN: -- isn't that what they're doing?  
23 MS. CORDRY: Right.  
24 MR. GROSSMAN: It's tautological, isn't it?  
25 It's --

Page 195

1 MS. CORDRY: Well --  
2 MR. GROSSMAN: -- the same thing. If you're  
3 saying that's what he said and if he's accurately saying it  
4 and if it's admissible, then that's what they're doing. Why  
5 ask him?  
6 MS. CORDRY: Okay. Well, then --  
7 BY MS. CORDRY:  
8 Q So whether or not -- okay, then I'll just put it  
9 that way -- whether or not Mr. Krask agrees with you, that  
10 may be what they're doing?  
11 A I'll talk to Mr. Krask and confirm.  
12 Q Okay.  
13 A I don't know what -- I haven't asked him that  
14 question.  
15 Q And so when you then got to -- okay. Let me just  
16 ask it a different way. So when you averaged these -- hold  
17 on. Monitor 1 has 120 readings, roughly; Monitor 2 had  
18 roughly 50 readings; and Monitor 3 has 350. When you  
19 averaged the monitors for the report you did in January,  
20 where you were showing that trend, did you average each --  
21 did you do an average for each monitor separately and then  
22 average the two of them together or did you just add all the  
23 numbers together and take a total average?  
24 A Well, I mean, and our position was they each had  
25 enough samples to be reasonably reliable of an annual

Page 196

1 period. We averaged the two, and we can, I know we -- I  
2 mean, frankly, you're going to say why didn't we just use  
3 the one that had more samples. The answer is, either way  
4 you did it, you'd arrive probably within a 10th of a  
5 microgram of the same answer, and frankly -- we spent a lot  
6 of time talking about particulates in this project; gas  
7 stations emit a minuscule amount of particulates -- it's  
8 sort of academic, in my judgment.  
9 Generally, for roadway studies in the past, we  
10 haven't even monitored particulates, and look at the gas  
11 station impacts, such as your rebuttal report. I mean, the  
12 annual average gas station contribution right in the middle  
13 of the gas queue is less than a microgram. So whatever  
14 differences there are in background and the rest relative to  
15 the standard, in my, in my opinion, is academic.  
16 Q Well, before you were coming up with the maximum  
17 contribution being in the point zero zero, I don't remember  
18 how many zeroes you had in there, kind of range. So .92 is  
19 actually dramatically higher than the numbers you've used  
20 before for the effect of the gas station, isn't it?  
21 A Well, for good reason. The .92 is in the middle  
22 of a gas queue. How many people live in the middle of a gas  
23 queue compared to what is the number at the closest  
24 residence? The .005 was at the homes, and as I showed in  
25 the rebuttal report, I scaled up the particulate emissions

Page 197

1 by a factor of 10 per MOVES versus MOBILE6 and the  
2 concentration at the homes certainly went up but they're way  
3 under 10; so -- or I'm sorry, they're much lower than --  
4 they're under .1 microgram. So that didn't -- that changed  
5 very marginally, but the point remains, where people can get  
6 exposed on an annual basis these concentrations are  
7 minuscule, and discussing background treatments and how much  
8 difference it would make how we average it, in my opinion,  
9 is not, you know, it's not going to make much difference.  
10 It's going to be low either way.  
11 Q Well, I understand what you're saying. If you had  
12 stayed with the three-year average, for instance, of that  
13 monitor that you were using before, you would have a number  
14 that could very easily, with an .92 micrograms per meter  
15 cubed, go over the 12, couldn't you?  
16 A I haven't run the math, and I'd be very surprised  
17 if that was the case. And, secondly, I've already stated in  
18 the record that that would be inappropriate to average three  
19 monitors, one of which had markedly different results and it  
20 wasn't a reference method.  
21 Q So when you --  
22 MR. GROSSMAN: No. Let's, let's move on to  
23 something else.  
24 MS. CORDRY: Okay. Okay. Well, I just --  
25 MR. GROSSMAN: You've beaten this into the ground,

Page 198

1 Ms. Cordry.  
2 MS. CORDRY: Can I ask exactly one question?  
3 MR. GROSSMAN: Exactly one.  
4 MS. CORDRY: Okay.  
5 BY MS. CORDRY:  
6 Q When you averaged the three monitors together,  
7 which you did in your rebuttal report, can you tell me how  
8 you did the averaging? Again, did you average each one  
9 separately and average that average, or did you add all the  
10 values together and do one average of all of it?  
11 MR. GOECKE: That was two questions.  
12 MS. CORDRY: No. That's an either/or question. I  
13 have --  
14 MR. GROSSMAN: I'll give her that flexibility.  
15 THE WITNESS: We assumed that each location had a  
16 sufficient number of monitoring data points to reasonably  
17 represent the annual average, and we averaged those three.  
18 BY MS. CORDRY:  
19 Q Okay. Some --  
20 MR. GROSSMAN: No, no, no.  
21 THE WITNESS: That was your one question.  
22 MR. GROSSMAN: That was the one question.  
23 MS. CORDRY: I just want to make sure I understand  
24 this. Please?  
25 MR. GROSSMAN: Why is it necessary?

Page 199

1 MS. CORDRY: Because there is --  
2 MR. GROSSMAN: Why is it --  
3 MS. CORDRY: -- a very big difference between  
4 averaging -- averaging averages versus putting all the  
5 observations together, and I just want to be sure I  
6 understand that.  
7 BY MS. CORDRY:  
8 Q You averaged the averages, right?  
9 MR. GROSSMAN: Do you really think it's going to  
10 make a difference, that, that kind of a difference in the  
11 result?  
12 MS. CORDRY: I think it'll make a huge difference.  
13 When one has three times as many as the other one  
14 combined --  
15 MR. GROSSMAN: All right.  
16 MS. CORDRY: -- it makes a huge difference in what  
17 an average could be.  
18 MR. GROSSMAN: Go ahead. Ask your clarification  
19 question --  
20 BY MS. CORDRY:  
21 Q Again, just --  
22 MR. GROSSMAN: -- I don't want to frustrate you  
23 too much.  
24 BY MS. CORDRY:  
25 Q -- assume, yes -- and I don't have the numbers

Page 200

1 right here -- but let's assume one was like eight and a half  
2 and eight and a half and the other was --  
3 A Eleven.  
4 Q Eleven, okay. You averaged eight and a half and  
5 eight and a half and 11, correct?  
6 A That's my recollection.  
7 Q Okay. As opposed to 500, you know, different  
8 values and getting a single average of all of those?  
9 A What does 500 mean?  
10 Q Well, 365 values from one monitor and 120 from  
11 another and 50 from the other. You didn't add up all 500  
12 numbers and then take an average?  
13 A That'd be statistically incorrect.  
14 Q Well, there's many questions about what's  
15 statistically incorrect, but --  
16 A But I -- again, my point is, this is all, this is  
17 all moot. We're talking about tiny, tiny numbers, to start  
18 with, from the gas station. It really is, and it's way  
19 under the standard, and my contention is, it's inappropriate  
20 what you're asking me. But if you -- you show 2011, 2013;  
21 we can look at what the average is. Putting aside the fact  
22 that that BAM is way out there, I doubt it's going to affect  
23 anything.  
24 So, I mean, I'll answer any question you have, but  
25 it doesn't seem to be productive to me to talk about

Page 201

1 something that's so small. And we're talking about the  
2 middle of a gas queue. EPA doesn't put annual average  
3 receptors in the middle of a gas queue or in the middle of a  
4 road to figure out if a project is okay or not. That's not  
5 their policy. We did it as just a point of perspective of  
6 what --  
7 MR. GROSSMAN: All right. All right, but you  
8 don't have to go on either. That's --  
9 BY MS. CORDRY:  
10 Q All right. In terms of the -- you would agree,  
11 would you not, now that under the current PM2.5 standard,  
12 the question of whether the region is in compliance, you  
13 can't average all of the different monitors together  
14 anymore, is that correct?  
15 A EPA does not go for spatial averaging.  
16 Q Okay. And, in fact, do they say that the, that  
17 you should use the monitoring site that represents area-wide  
18 air quality recording the highest PM2.5 concentrations?  
19 A What are you, what are you reading from?  
20 Q From the EPA rule.  
21 A I don't have it in front of me. I can tell you  
22 that the standard practice for modeling is to use  
23 representative values for the location at hand. That's what  
24 we've done.  
25 MR. GROSSMAN: How much longer?

Page 202

1 MS. CORDRY: About five minutes, maybe --  
2 MR. GROSSMAN: Okay.  
3 MS. CORDRY: -- max.  
4 MR. GROSSMAN: Because Mr. Silverman is getting to  
5 look very hungry.  
6 MR. SILVERMAN: Very hungry.  
7 MS. CORDRY: Oh, sorry.  
8 MS. ADELMAN: He's going to have a sign soon that  
9 says lunch.  
10 UNIDENTIFIED SPEAKER: Right.  
11 MR. SILVERMAN: A flash.  
12 MS. CORDRY: Actually, I may be just about done.  
13 Let me just double-check something here.  
14 MR. GROSSMAN: I don't think the warning  
15 penetrated in time. Are you okay -- are you okay, Dr. --  
16 UNIDENTIFIED SPEAKER: Is the computer okay?  
17 MS. CORDRY: Yes, I think the computer seems to be  
18 okay as well. All right. I think that will do, and we'll  
19 take up anything else in our own testimony. Thank you.  
20 MR. GROSSMAN: All right. I thank you very much,  
21 but I think that there's additional cross-examination from  
22 Ms. Rosenfeld --  
23 MS. CORDRY: Yes. Yes. I'm sorry, yes.  
24 MR. GROSSMAN: -- and a little bit, five minutes  
25 from Mr. Silverman.

Page 203

1 MR. SILVERMAN: I'll talk fast.  
2 MR. GROSSMAN: So we will see you -- we'll break  
3 for lunch until --  
4 (Whereupon, at 1:29 p.m., a luncheon recess was  
5 taken.)  
6 MR. GROSSMAN: And we're back on the record.  
7 Ms. Rosenfeld.  
8 MS. ROSENFELD: Good afternoon, Mr. Grossman.  
9 MR. GROSSMAN: How are you?  
10 MS. ROSENFELD: Fine, thank you. How are you?  
11 MR. GROSSMAN: I'm doing well, thank you. You may  
12 proceed.  
13 MS. ROSENFELD: Okay. Thank you.  
14 BY MS. ROSENFELD:  
15 Q Hello, Mr. Sullivan.  
16 A Good afternoon.  
17 Q Before we get into specific details about the new  
18 methodology that you used in your rebuttal report, I'd like  
19 to talk to you just generally about -- an overview about how  
20 you developed it for use. This is the first time in this  
21 case that you've relied on the ozone limiting method, is  
22 that correct?  
23 A Yes.  
24 Q And it's also the first time in this case that  
25 you've used the matched backgrounds methodology, is that

Page 204

1 correct?  
2 A That's correct.  
3 Q And in his testimony Dr. Cole did explain somewhat  
4 about the three tiers of analysis for NO2 emissions that the  
5 EPA has established, is that correct?  
6 A I believe he did.  
7 Q And a Tier 1 is a model that assumes that all NOx  
8 is converted to NO2, is that correct?  
9 A Yes.  
10 Q And did you show a Tier 1 analysis in your  
11 rebuttal report?  
12 A I did not. Well, let me rephrase that. Stage II  
13 and Stage III clearly were not, were not. So in that  
14 context, no, we did not. Stage -- I did show Stage I in my  
15 report, which was drawing from the August report, which, you  
16 know, did assume 100 percent NOx was NO2.  
17 Q So the results in Figure 1 on page 11 reflect --  
18 MR. GROSSMAN: No, let's make sure we know which  
19 one you're referencing. You're referencing the rebuttal  
20 report now?  
21 MS. ROSENFELD: Yes, I am.  
22 MR. GROSSMAN: And page which?  
23 MS. ROSENFELD: I have the redlined version. On  
24 mine it's page 11. It's Figure 1, Stage I.  
25 MR. GROSSMAN: Ah. Well, you have the redlined

Page 205

1 version. I have the actual exhibit, 466. So let's --  
2 MS. ROSENFELD: Okay. I don't have a copy of the  
3 signed report.  
4 MR. GROSSMAN: Mr. Goecke will supply you with a  
5 copy.  
6 MS. ROSENFELD: Okay.  
7 MR. GOECKE: I'm going to try. I gave those out  
8 before, I think.  
9 MS. ROSENFELD: I didn't get one. Dr. Cole has  
10 one.  
11 MR. GROSSMAN: Okay.  
12 MS. ROSENFELD: I'll share his.  
13 BY MS. ROSENFELD:  
14 Q On mine it is page 11. Is it page 11 on yours,  
15 Mr. Sullivan?  
16 A It is.  
17 Q Okay. And would that reflect a Tier 1 analysis,  
18 100 percent conversion?  
19 A It's 100 percent -- 100 percent of the NOx is  
20 assumed to be NO2.  
21 Q Okay. And is the EPA required to approve a Tier 1  
22 analysis? Does it require approval?  
23 A Well, not in this case, it does not.  
24 Q Okay. And does a Tier 2 analysis assume that 80  
25 percent of the NOx is converted to NO2?

Page 206

1 A It does.

2 Q And do you require, or is the EPA required to

3 approve a Tier 2 analysis or is it a preferred model?

4 A In what context?

5 Q In the context, for example, of your modeling in

6 this case.

7 A EPA doesn't have to approve anything in this case.

8 Q And the EPA regulations allow for a Tier 3

9 analysis as well, is that correct?

10 A The guidelines have three tiers, and they do allow

11 for a Tier 3 analysis.

12 Q And when you talk about the guidelines, are you

13 referencing what's known as Appendix W, which is Exhibit

14 285?

15 A That's, that's one guideline. They have other

16 guidelines, for example, specific to NO2, but their, EPA's

17 guidelines, in general, do allow for multitier analysis, and

18 generally, three tiers is common.

19 Q Okay. And a Tier 3 analysis is reviewed and

20 approved by the EPA on a case-by-case basis, isn't that

21 correct?

22 A It depends.

23 Q And it depends on what?

24 A Depends, is it a PSD, Prevention of Significant

25 Deterioration permit, a permit to instruct? In this case,

Page 207

1 it's the -- it's not a permit. In this case, we're doing

2 modeling for, for the special exception process. EPA has no

3 requirement for any review for that type of analysis.

4 Q And it has been your position, though, that you

5 have followed EPA guidance with respect to the modeling

6 approaches that you've taken in this case, is that correct?

7 A We followed their guidance, but that doesn't

8 include submitting the data, the reports, and the protocols

9 to EPA for review because they're not involved in the

10 process.

11 Q And if you were in an EPA regulatory process, the

12 Tier 3 approach that you used would require EPA review and

13 approval, is that correct?

14 A If we were, but of course, we aren't.

15 Q I understand that. I'm trying to clarify. If you

16 were, you would need EPA --

17 A If we were, the entire process would go before the

18 state. EPA would then review in the end what was done by

19 the state, in this case, the Maryland Department of the

20 Environment. They would have primacy.

21 Q Would they be considered the regional office --

22 A No.

23 Q -- Maryland? Okay.

24 A No. Maryland would be considered the designated

25 state that's overseeing the Clean Air Act issues for the

Page 208

1 State of Maryland.

2 Q As I recall, when I was asking you questions the

3 last time I was here, I asked you, for the ozone limiting

4 method, whether or not it qualified as a preferred method

5 under EPA guidelines, and you told me, if I understood you

6 correctly, that it did qualify as a preferred method. Is

7 that your testimony?

8 A I think what I said was the EPA has what's called

9 regulatory options. Neither, neither ozone limiting method

10 nor the PVMRM, the alternative method, are considered

11 regulatory defaults. EPA defines standardized, here's what

12 you do. It's not in there on that basis, but they clearly

13 are options that EPA allows to be considered on a

14 case-by-case basis.

15 Q So in Exhibit 391(a), which is an EPA guidance

16 memo dated June 29th, 2010 -- actually, the attachment is

17 June 28th, 2010 -- from Tyler Fox, it characterizes the OLM

18 and the PVRM method, which you just mentioned, are both

19 available as non-regulatory default options within the

20 EPA-preferred AERMOD dispersion method. Is that, is that

21 correct?

22 A And which page are you on in that document?

23 Q I'm on page 16.

24 A You said June?

25 Q This would be the 2010, June 28th, 2010, memo.

Page 209

1 A What's the title of that document?

2 Q Applicability of Appendix W Modeling Guidance for

3 the One-Hour NO2 National Ambient Air Quality Standard from

4 Tyler Fox.

5 A Mr. Fox issued an updated version of that dated

6 March 1st, 2011, that further clarified Appendix W Modeling

7 Guidance to the One-Hour NO2. I don't -- I have that in

8 front of me. I don't have the earlier version you're

9 referring to.

10 Q Okay. Hang on one second. I have an extra copy.

11 MR. GOECKE: Thank you.

12 MS. ROSENFELD: This is already in the record.

13 MR. GROSSMAN: Okay. And this is exhibit what

14 again? 391(a).

15 MS. ROSENFELD: 391, and it's marked on --

16 MR. GROSSMAN: I see it.

17 MS. ROSENFELD: -- on the other pages.

18 THE WITNESS: Which page were you referring to,

19 Ms. Rosenfeld?

20 BY MS. ROSENFELD:

21 Q I'm looking at page 16.

22 A Okay.

23 Q And in the second full paragraph, I'm reading from

24 the first sentence: The OLM and PVRM methods are both

25 available as non-regulatory default options --

Page 210

1 A Correct.

2 Q -- within the EPA-preferred AERMOD dispersion  
3 method, correct?

4 A That's what it says.

5 MR. GROSSMAN: It says, dispersion model.

6 MS. ROSENFELD: Dispersion model, you're correct.

7 BY MS. ROSENFELD:

8 Q Are you -- first of all, there are references  
9 throughout Appendix W and, I believe, both of the EPA memos,  
10 Exhibit 391 and 485, that talk about the PVRM method. Do  
11 you agree that that has nothing to do with the case that  
12 we're, we're involved with? You didn't use any PVRM  
13 analysis, did you?

14 A We tested it. We --

15 Q Okay.

16 A -- gave essentially for this application the same  
17 values, very similar to OLM.

18 Q Okay. And is that testing reflected in your  
19 rebuttal report?

20 A No. We -- no, it is not. We just did some  
21 testing before we ran either one of them and concluded that  
22 OLM -- neither one would give comparable results. We used  
23 OLM.

24 Q Okay. And so when I, when I ask you about the EPA  
25 regulations and guidance as it reflects -- as it relates to

Page 211

1 OLM, we can disregard the PVRM reference as well?

2 A I mean, we can. I'm saying that's -- if we use  
3 OLM or PVMRM, it would lead to the same answer. This is a  
4 ground-level source. They tend to produce similar results  
5 for that type of application.

6 Q Okay. The ozone limiting method itself is not a  
7 preferred method, is it?

8 A It's not a guideline -- it's not a regulatory  
9 default guideline method. It's certainly an allowable  
10 method that can be used. When you say preferred, what's the  
11 context for preferred?

12 Q Well, in the next sentence on page 16 of Exhibit  
13 391, the EPA memo says: As a result of their non-regulatory  
14 default status, pursuant to Sections 3.1.2c, 3.2.2a, and  
15 A.1a(2) of Appendix W, application of AERMOD with the OLM or  
16 PVRM option is no longer considered a, quote, preferred  
17 model, end quote, and therefore requires justification and  
18 approval by the regional office on a case-by-case basis,  
19 correct?

20 A That would be -- that's what it says, and that  
21 would be applicable if you were doing a modeling analysis  
22 for a permit under the Clean Air Act. You would be required  
23 to have that approach most likely included in a protocol and  
24 approved and then reviewed after you finish your analysis,  
25 before the permit was granted.

Page 212

1 Q Further along in that same paragraph, it says that  
2 as long as the PVRM and OLM options are considered to be  
3 non-regulatory default options, their use as an alternative  
4 modeling -- their use as alternative modeling techniques  
5 under Appendix W should be justified in accordance with  
6 Section 3.2.2, paragraph (e), as follows, is that correct?

7 A That sounds correct.

8 Q Do you have a copy of Exhibit 391? I'm looking at  
9 page 16.

10 A I'm on page 16 --

11 Q Okay.

12 A -- of Exhibit 391.

13 Q That's the last sentence before we get to  
14 subparagraph (c).

15 A Yes, I see that.

16 Q And do you have a copy of Exhibit 285, which is  
17 Appendix W?

18 A I do not.

19 Q All right.

20 MR. GROSSMAN: You handed out a fair portion of it  
21 the last time. If you're going to use that same portion,  
22 then I have, I have what you handed out from the last time.

23 MS. ROSENFELD: I believe I actually handed out  
24 the entire --

25 MR. GROSSMAN: Oh, okay.

Page 213

1 MS. ROSENFELD: -- Appendix W.

2 MR. GROSSMAN: That may be. Let's see. It might  
3 be the whole one. It's a significant size, in any event.

4 MS. ROSENFELD: Well, I thought I had an extra  
5 copy.

6 MR. GROSSMAN: The witness can look at my copy --

7 MS. ROSENFELD: Do you have extra copies?

8 MR. GROSSMAN: -- if you want, or we can get it  
9 from the file, but that takes more digging.

10 MS. ROSENFELD: You don't have an extra copy, do  
11 you? Appendix W.

12 MS. HARRIS: I don't. Do you?

13 MR. GOECKE: No.

14 MS. ROSENFELD: Okay. That's okay. This won't be  
15 long.

16 BY MS. ROSENFELD:

17 Q When you take a look at Exhibit 391(a) on page 16,  
18 there are, there's a subparagraph (c) that says that  
19 alternative modeling techniques should be justified in  
20 accordance with Section 3.2.2, paragraph (c), as follows.  
21 If you would take a look at what --

22 MR. GROSSMAN: I think it says, paragraph (e), as  
23 follows.

24 THE WITNESS: It is (e).

25 MS. ROSENFELD: It is (e). It just didn't copy

Page 214

1 very clearly here.  
2 BY MS. ROSENFELD:  
3 Q If you would just take a look and let me know if  
4 the standards in --  
5 A I have the same -- is this in the same thing,  
6 391(a)? Yeah --  
7 Q Yes.  
8 A -- I have a copy here.  
9 Q If you could take a look and tell me if they're  
10 the same as the standards that were included in Appendix W.  
11 A Well, Appendix W is a huge document. Which  
12 portion is it you're referring to?  
13 Q Section 3.2.2e and the subsections below.  
14 A Well --  
15 Q Do they correspond with the standards that are set  
16 out in Exhibit 391(a)?  
17 A They appear to be comparable.  
18 Q So it wouldn't appear that the standards have  
19 changed between those two documents?  
20 A It doesn't appear that way, but I did point out  
21 earlier that this version, 391(a), is, certainly has a newer  
22 version of this document that's been issued by Mr. Fox. So  
23 some of the things on 391(a) could be superseded.  
24 Q And do you have that superseded document?  
25 A I do, but it's in one of my references that I

Page 215

1 provided in my rebuttal report.  
2 Q Okay. And do you have any opinion as to whether  
3 or not that has been superseded by the newer, newer  
4 standards?  
5 A I haven't compared them side by side, but my  
6 opinion, just to be clear, is that Appendix W and this  
7 statement here is very applicable to regulatory modeling and  
8 these steps would be met. We don't have a regulatory  
9 authority, an air program authority reviewing this. So we  
10 cannot, you know, get the, even though I tried --  
11 Q And --  
12 A -- to have Maryland Department of the Environment  
13 be involved in the process and be involved in the protocol.  
14 They aren't. So we can't, we can't do all these steps, but  
15 we tried to follow, to the best of our ability, the more  
16 recent version of the Fox memo and the guidelines to do  
17 this, this task.  
18 Q But you have no reason to think that these  
19 criteria have been revised or updated in any way?  
20 A I don't -- I'd have to do a comparison. Off the  
21 top of my head, I don't know if the version you showed me,  
22 where it differs from the March 11th, March 1st, 2011,  
23 version that Mr. Fox issued to the Regional Air Division  
24 directors.  
25 Q Okay. Well, assuming for the moment that those

Page 216

1 standards haven't changed, my -- I appreciate what you're  
2 saying, that you're not in a permit review posture before  
3 the EPA, but you have put forward the EPA guidance as the  
4 ruler that you're using to measure compliance with the  
5 NAAQS, is that correct?  
6 A Well, to put it in its full context, what I have  
7 said, yes, we're following EPA's guidance, but part of EPA's  
8 guidance also says that the most accurate modeling  
9 methodology to the case at hand should be applied. That's  
10 the overarching direction in EPA's --  
11 MR. SILVERMAN: I didn't hear that.  
12 THE WITNESS: That's the overarching guidance on  
13 air quality modeling from EPA, and so when you say following  
14 EPA procedures and guidance, yes, we are, with the  
15 understanding that for this site-specific matter here, we're  
16 using judgment to apply them in an accurate and appropriate  
17 way.  
18 BY MS. ROSENFELD:  
19 Q Well, you've made that very clear, and we'll go  
20 through your report in more detail, but my underlying  
21 question for you was, it has been your position that in this  
22 case the Hearing Examiner and ultimately the Board of  
23 Appeals needs to look to the EPA guidance and the EPA  
24 standards to determine whether or not the NAAQS have been  
25 satisfied, is that correct?

Page 217

1 A With the caveat I just said, that's correct.  
2 Q And it's been your position that you have tried to  
3 follow and apply EPA guidance in your modeling, is that  
4 correct?  
5 A I certainly have done my best to take EPA's  
6 guidance and apply it to this matter, which in many ways is  
7 very atypical, but I've done the best I could to follow  
8 methodology to, to address the application at hand.  
9 Q Going back to Appendix W, and I'm now looking at  
10 subsection (e). I'm on page 68232 under Recommendations,  
11 and this applies to, determination of acceptability of a  
12 model is a regional office responsibility. And I understand  
13 your position that we're not in that process, but  
14 nonetheless, under the Tyler Fox memo, it says that  
15 non-regulatory default options should be justified in  
16 accordance with Section 3.2.2, paragraph (e), as follows.  
17 So my questions for you start with the first of  
18 those subsections, little i, and the first factor requires  
19 that the model has received a scientific peer review. Has  
20 your rebuttal report received a scientific peer review?  
21 A That's not the same question being raised. Point  
22 i says: The model has received a scientific peer review.  
23 AERMOD has received a scientific validation, scientific peer  
24 review --  
25 Q Actually, I --

1 A -- we're using AERMOD in this option without any  
2 modification.

3 Q Actually, I think what it says is, an alternative  
4 refined model may be used provided that the model has  
5 received a scientific peer review, and your application of  
6 the OLM, the ozone limiting method, is an alternative  
7 refined method within AERMOD.

8 A It is not, and you're reading something different  
9 than I am. I'm looking at 391(a), little i, that says: The  
10 model has received a scientific peer review. Does Appendix  
11 W say something different?

12 Q Appendix W says: An alternative refined model may  
13 be used provided that the model has received a scientific  
14 peer review.

15 A That's -- we are using AERMOD, which has been  
16 fully validated, and we're using, again, OLM, without  
17 modification. We don't have to, we don't have to justify  
18 the use of that model for this application.

19 MR. GROSSMAN: Ms. Rosenfeld, are you suggesting  
20 that the word model there refers not to the AERMOD model but  
21 to the work he has done in applying the model? Is that the  
22 implication of your question?

23 MS. ROSENFELD: That is -- it's not the  
24 implication. I thought I had asked that question, because  
25 when you look at the preceding paragraph, the EPA

1 specifically says: As a result of their non-regulatory  
2 default status, pursuant to Sections -- and it goes through  
3 the three sections, including this 3.2.2a -- application of  
4 AERMOD, application of AERMOD with the OLM or PVRM option is  
5 no longer considered a preferred model and, therefore,  
6 requires justification and approval by the regional office  
7 on a case-by-case basis. And then it goes on to say as long  
8 as, and I'm paraphrasing here for a moment -- frankly, I'll  
9 just read it into the record:

10 While EPA is continuing to evaluate the PVRM and  
11 OLM options within AERMOD for use in compliance  
12 demonstrations for the one-hour NO2 standard, as long as  
13 they are considered to be non-regulatory default options,  
14 their use as alternative modeling techniques under Appendix  
15 W should be justified in accordance with Section 3.2.2,  
16 paragraph (e), as follows.

17 And I'm simply asking Mr. Sullivan whether or not  
18 he has conducted the analysis, whether his rebuttal report  
19 has been justified under these five points --

20 MR. GROSSMAN: I think I understand.

21 MS. ROSENFELD: -- under subsection (e).

22 MR. GROSSMAN: Yes. I just want to make sure that  
23 -- well, I guess there are three levels here. One is AERMOD  
24 itself --

25 MS. ROSENFELD: Right.

1 MR. GROSSMAN: -- and Mr. Sullivan is suggesting  
2 that AERMOD itself is the model they're referencing there.  
3 Am I correct, Mr. Sullivan?

4 THE WITNESS: That's correct.

5 MR. GROSSMAN: Okay.

6 MS. ROSENFELD: And we concur with that point.  
7 We --

8 MR. GROSSMAN: Okay.

9 MS. ROSENFELD: -- are not questioning AERMOD.

10 MR. GROSSMAN: Then there's the question of the  
11 application of the OLM method to AERMOD --

12 MS. ROSENFELD: Yes.

13 MR. GROSSMAN: -- and you're suggesting that  
14 that's an alternative model under the EPA guidance and that  
15 therefore that model in and of itself, that is, that  
16 alternative model, must be justified under these sections.  
17 Is that what you're suggesting?

18 MS. ROSENFELD: Oh, that's not what I'm --

19 MR. GROSSMAN: And then the third level is, is the  
20 work itself, that is, his application of this modified model  
21 to these, to the data, and are you suggesting that has to be  
22 reviewed? So I'm trying to find out which level of this  
23 you're suggesting.

24 MS. ROSENFELD: Your question is very well put.  
25 AERMOD, we agree, is the appropriate modeling package to

1 use. Then there's a threshold question, and that threshold  
2 question is set out in the Section 3.2.2, paragraph (e),  
3 which says that because OLM and PVRM are non-regulatory  
4 default options, they are no longer considered a preferred  
5 model and they require justification and approval by the  
6 regional office on a case-by-case basis. And then the last  
7 clause of the last sentence --

8 MR. GROSSMAN: By the way, if I remember  
9 correctly, that language you said about the preferred model,  
10 that didn't come from the EPA Appendix W; that comes from  
11 the Fox memo, is that correct?

12 MS. ROSENFELD: The Fox memo --

13 MR. GROSSMAN: Is there something in the EPA  
14 Appendix W that uses the term preferred, or is that -- or  
15 that language you just read me, that came from the --

16 MS. ROSENFELD: The designation of the OLM and the  
17 PVRM as non-preferred models comes from the EPA guidance  
18 memo in Exhibit 391(a).

19 MR. GROSSMAN: 391, and that comes -- that's not  
20 in Appendix W; that's, that's the memo from Tyler Fox?

21 MS. ROSENFELD: That's the memo from Tyler Fox.

22 MR. GROSSMAN: Okay. I just wanted to make sure  
23 we're not talking about different things. Okay.

24 MS. ROSENFELD: And then in that memo from Tyler  
25 Fox, it says that as long as the OLM or PVRM options are not



Page 222

1 considered preferred models, as long as they are considered  
2 to be non-regulatory default options --  
3 MR. GROSSMAN: Right.  
4 MS. ROSENFELD: -- their use as alternative  
5 modeling techniques under Appendix W should be justified in  
6 accordance with Section 3.2.2, paragraph (e). That 3.2.2,  
7 paragraph (e), is on page 68232 of Appendix W, which is  
8 Exhibit 285. So the threshold question is, has use of OLM  
9 been justified in accordance with the standards in Appendix  
10 W?  
11 MR. GROSSMAN: All right. I understand your  
12 question. I just wanted to make sure I knew whether you  
13 were applying that to AERMOD itself, whether you considered  
14 then AERMOD as being a modified --  
15 MS. ROSENFELD: Yes.  
16 MR. GROSSMAN: -- model, which I think is what  
17 you're saying, that that's what you're saying, that --  
18 MS. ROSENFELD: Right.  
19 MR. GROSSMAN: -- because the term model is used  
20 here, and so you're saying, in effect, that AERMOD is now  
21 modified by the OLM method, and I think Mr. Sullivan is  
22 saying he disagrees with that, but we can hear him out. And  
23 then the third thing is you're not saying that the actual  
24 data application to this modified model has to be reviewed;  
25 it's just that the model itself, as modified, has to be

Page 223

1 reviewed, in your interpretation.  
2 MS. ROSENFELD: Well, yes, I'm not quite there  
3 yet. I think the threshold question is whether or not use  
4 of the OLM within the AERMOD model is justified under this  
5 section. I think part of that analysis includes whether or  
6 not EPA guidance was followed in more specific detail as the  
7 model was developed, but the very first threshold question  
8 is, has it been justified under these, under this five-prong  
9 review criteria?  
10 MR. GROSSMAN: Right. Yes, I understand that's  
11 your question, but I'll let you continue to question the  
12 witness on the stand.  
13 MS. ROSENFELD: Okay.  
14 MR. GROSSMAN: By the way, you said that that, the  
15 Fox memorandum had been superseded --  
16 MR. SILVERMAN: Been supplemented, sir.  
17 MR. GROSSMAN: -- what's the, what's the date of  
18 the superseded, the superseding memo?  
19 THE WITNESS: It's --  
20 MR. SILVERMAN: I want to object, Mr. Grossman, to  
21 the word superseded.  
22 MR. GROSSMAN: Well, he, I think he used that  
23 term.  
24 MR. SILVERMAN: It's a term of art.  
25 THE WITNESS: It's March 1st, 2011. The title is

Page 224

1 Additional Clarification Regarding Application of Appendix W  
2 Modeling Guidance for the One-Hour NO2 National Ambient Air  
3 Quality Standard.  
4 MR. GROSSMAN: Okay. So we won't, we won't --  
5 we'll call it clarification, not superseded.  
6 MR. SILVERMAN: Thank you. Thank you.  
7 MS. ROSENFELD: Right. And, Mr. Grossman, it is  
8 in the record already as Exhibit 407, and I have --  
9 MR. GROSSMAN: Okay.  
10 MS. ROSENFELD: -- an additional copy for you as  
11 well.  
12 MR. GROSSMAN: Okay. Thank you.  
13 BY MS. ROSENFELD:  
14 Q Do you have one?  
15 A Do I have which one?  
16 Q The 2011.  
17 A I have it.  
18 Q Okay.  
19 MR. GROSSMAN: All right.  
20 BY MS. ROSENFELD:  
21 Q So going back now to Appendix W, Section 3.2.2e  
22 under subsection (i), and just to sort of recap, this  
23 subsection (e) says: An alternative refined model may be  
24 used provided that the model has received a scientific peer  
25 review. Has your alternative refined model, reflected in

Page 225

1 your rebuttal report, received a scientific peer review?  
2 A To clarify -- no, of course it has not. We don't  
3 have a scientific peer review committee here, but the answer  
4 to your question is, I disagree with the premise. EPA is  
5 talking about a model. Models go through peer review. They  
6 go through validation and evaluation based on measured data  
7 and so forth. These points that you're showing here relate  
8 to that. There's no way an applied model is going to have  
9 scientific peer review. I could be getting a permit for  
10 Bethlehem Steel Company. There won't be a scientific peer  
11 review. They won't be comparing our modeling results to  
12 measured values at that application. That's for model  
13 validation of a model like AERMOD.  
14 So what I'm saying is, what you're saying doesn't  
15 apply to what we did here, and again, the work we did here  
16 is not to get a permit. I'm trying to follow EPA guidance,  
17 but I can't do these steps. It's not applicable to this  
18 kind of an application.  
19 MR. GROSSMAN: I understand.  
20 BY MS. ROSENFELD:  
21 Q And so if I look at page 68236 of Exhibit 285,  
22 which is Appendix W, there's a chart on the top of that  
23 page. It says, Tier 1, Assume Total Conversion of NO to  
24 NO2; Tier 2, it talks about the conversion factor of .75,  
25 which has been updated to .80, and we'll cover that later;

Page 226

1 and then Tier 3, Detailed Analysis on Case-By-Case Basis.  
2 So is it your position that you could never have a  
3 permit analysis under, under an alternative modeling  
4 technique unless that model had been scientifically peer  
5 reviewed and accepted in its entirety for application of any  
6 permit application?  
7 A Correct. If you're using an alternative model --  
8 Q Yes.  
9 A -- one that's not an EPA-approved model in  
10 Appendix W -- Appendix A, I think it is, or Appendix W -- if  
11 you don't use one of those models that's been through  
12 peer-review process, you'd have to have the scientific peer  
13 review, validation, documentation, which is a big deal, but  
14 that's not what we're doing here. We're using an existing  
15 model with an existing option, and we're applying it to the  
16 matter at hand. So it's kind of apples and oranges that  
17 you're comparing here. Well, it is apples and oranges.  
18 Q So you're not using Tier 1, you're not using Tier  
19 2, and you're not using Tier 3. You're using something  
20 entirely different. Is that what I --  
21 A I didn't say that.  
22 Q Well, what did you say, because I've heard you say  
23 what it's not?  
24 A We're doing site-specific, which would be  
25 consistent with Tier 3. What I said was that the

Page 227

1 constraints that you're referring to on model validation and  
2 so forth and, frankly, to have a regulatory agency review  
3 the work is not an option here. Maryland does not, will not  
4 be involved in this review process. So that step cannot  
5 occur.  
6 MR. GROSSMAN: Perhaps I can shorten some of this  
7 by saying, on the one hand, I want to hear about whether the  
8 OLM method has been scientifically accepted, because I think  
9 that's a part of what you objected to. So that to me is an  
10 issue that needs to be addressed here, but on the other  
11 hand, the question of whether or not all of these processes  
12 through EPA have been gone through is irrelevant here. It  
13 doesn't apply to this situation, and I can save you a lot of  
14 time perhaps by saying, I'm not going to throw out the use  
15 of the OLM method because he hasn't gone to the EPA to get  
16 it approved, because I don't think that's appropriate under  
17 these circumstances for all of the reasons the witness said.  
18 Now, that's different from saying that he can apply the OLM  
19 method if it's not scientifically acceptable.  
20 So that's more the direct question that I would  
21 like to see addressed. I don't expect the EPA to be  
22 directly involved in the review of this special exception.  
23 It's not part of its governmental role.  
24 MS. ROSENFELD: And I'm not --  
25 MR. GROSSMAN: I do look to EPA guidance and

Page 228

1 regulations to better understand the process, the thought  
2 process I would go through in analyzing this, but that's not  
3 the same as to say that he has to get everything reviewed by  
4 EPA.  
5 MS. ROSENFELD: I'm not suggesting in any way that  
6 this should go to the EPA for review and approval, but I do  
7 suggest that Exhibit 391, in my view, is perfectly clear  
8 that using the OLM method within AERMOD is a non-regulatory  
9 default application and it's no longer considered a  
10 preferred model and, as long as the OLM method is considered  
11 a non-regulatory default option, its use as an alternative  
12 modeling technique under Appendix W should be justified in  
13 accordance with Section 3.2.2.  
14 MR. GROSSMAN: Yes, but then you wanted to justify  
15 it by doing things that involve the EPA, as a practical  
16 matter, which is not --  
17 MS. ROSENFELD: Well, no. A scientific peer  
18 review is not --  
19 MR. GROSSMAN: Well --  
20 MS. ROSENFELD: -- is not EPA.  
21 BY MS. ROSENFELD:  
22 Q Let me ask you this: You --  
23 MR. GROSSMAN: I just, I have to tell you, I just  
24 don't think --  
25 MS. ROSENFELD: Okay. Well --

Page 229

1 MR. GROSSMAN: -- I understand your point, but I  
2 don't agree with it. I also looked to the actual Appendix W  
3 itself --  
4 MS. ROSENFELD: Yes.  
5 MR. GROSSMAN: -- where it says on page 68236 --  
6 and they say my reports are too long -- (d) on that first  
7 column: For --  
8 MS. ROSENFELD: Yes.  
9 MR. GROSSMAN: -- Tier 3, third level, analysis, a  
10 detailed screening method may be selected on a case-by-case  
11 basis. For point source modeling, detailed screening  
12 techniques such as ozone limiting method may also be  
13 considered. Now, you've raised this -- to me, that's, that  
14 is saying that you can consider using the OLM method. The  
15 question is that you have raised is whether or not that's a  
16 scientifically acceptable method.  
17 So let's hear evidence on that point, and I will  
18 ask Mr. Sullivan, if you don't, what is the scientific basis  
19 for using the OLM method and how is it approved, you know,  
20 in terms, has it been used by others, has it been accepted  
21 by the EPA. So those are the questions that really bear on  
22 your underlying evidentiary challenge --  
23 MS. ROSENFELD: Well --  
24 MR. GROSSMAN: -- to his rebuttal.  
25 MS. ROSENFELD: -- I certainly will get to those

Page 230

1 questions, but I think the threshold question that bears on  
2 whether or not this can be accepted in this case by the fact  
3 finder in this case is whether or not these threshold  
4 questions have been met. And for --  
5 MR. GROSSMAN: I don't agree with you. I've heard  
6 you, and I don't agree with you.  
7 MS. ROSENFELD: Well, I understand, but if I  
8 could, please, make my record.  
9 MR. GROSSMAN: Yes.  
10 MS. ROSENFELD: Okay.  
11 BY MS. ROSENFELD:  
12 Q The model has received a scientific peer review.  
13 You testified that you had discussed your OLM approach with  
14 Mr. Hlinka from your firm, is that correct?  
15 A Well, but I just, I just want to clarify. There's  
16 one word you left out that's very important. What EPA  
17 actually says is -- there's no preferred model for the OLM  
18 method. In all these -- paragraph (e), then it says, an  
19 alternative, key word, refined model may be used --  
20 Q Yes.  
21 A -- if these conditions are met. Well --  
22 Q Right.  
23 A -- that's a different model. It's not a different  
24 application. It's a different model. And so all these  
25 conditions have nothing to do with what we've done here.

Page 231

1 Q That's not what that says. EPA is continuing to  
2 evaluate the PVRM and OLM options within AERMOD -- nobody  
3 has challenged the use of AERMOD -- within AERMOD for use  
4 and compliance demonstrations for the one-hour NO2 standard.  
5 As long as they are considered to be non-regulatory default  
6 options, their use as alternative modeling techniques under  
7 Appendix W should be justified in accordance with Section  
8 3.2.2, as follows. That's what --  
9 A Well, the alternative -- an alternative refined  
10 model is a different model than AERMOD.  
11 Q That's not how, that's not what EPA --  
12 MR. GROSSMAN: I understand. You two disagree  
13 on --  
14 MS. ROSENFELD: We disagree.  
15 MR. GROSSMAN: -- what that means.  
16 MS. ROSENFELD: Okay. We disagree.  
17 MR. GROSSMAN: I understand. Now we've gone over  
18 that three times.  
19 MS. ROSENFELD: Now, if I, okay, I'm not -- if I  
20 could ask my questions --  
21 MR. GROSSMAN: Fair enough.  
22 MS. ROSENFELD: -- based on my reading of this  
23 case, I would appreciate it.  
24 MR. GROSSMAN: You may, but I'm just saying, you  
25 two disagree. Let's not go over that again.

Page 232

1 MS. ROSENFELD: Okay.  
2 BY MS. ROSENFELD:  
3 Q Number one, the model has received a scientific  
4 peer review -- I understood you to testify that you did  
5 discuss your modeling approach with Mr. Hlinka, is that  
6 correct?  
7 A I did.  
8 Q Did you discuss it with Dr. Cole, who you  
9 initially discussed protocol issues with?  
10 A I did not.  
11 Q Okay. Did you discuss it with anybody else in the  
12 scientific community?  
13 A I did not.  
14 Q And did you discuss it with Mr. Krask from the  
15 EPA, the approach?  
16 A No. Mr. Krask is a monitoring person. No, I did  
17 not.  
18 Q Okay. So even in the non-regulatory setting, you  
19 made no attempt to provide a scientific peer review for your  
20 modeling approach, is that correct?  
21 A Again, there's not an --  
22 Q It's a simple question.  
23 A -- opportunity or time or necessary to do a  
24 scientific peer review for this model application.  
25 Q And no peer consultation outside of your own firm?

Page 233

1 A I'm running, I'm running an EPA model using an  
2 available option that's described in this, in the memo  
3 that's more recent than the one you showed, the Fox, March  
4 11, March 1st, 2011, and certainly it's an option mentioned  
5 in there for consideration, which we've used.  
6 Q Well, I did ask you if the 2011 Fox memo modified  
7 any of these factors under 3.2.2e.  
8 A I just scanned it right now. I don't see those  
9 constraints being put into this document.  
10 Q Right. The second point, the model can be  
11 demonstrated to be applicable to the problem on a  
12 theoretical basis -- do you have anywhere in your rebuttal  
13 report where you show that the model can be demonstrated to  
14 be applicable to the problem on a theoretical basis?  
15 A I certainly talked about the applicability of OLM.  
16 I provided probably 10 references, peer-reviewed references  
17 on the topic. So I'd say you can construe my report to  
18 addressing those issues, yes.  
19 Q Okay. So your analysis on that point is contained  
20 in your references section, is that --  
21 A In my -- and I think it's Appendix B of my  
22 rebuttal report.  
23 Q Okay. And the data bases which are necessary to  
24 perform the analysis are available and adequate -- where is  
25 that outlined in your report?

Page 234

1 A Well, I'm not sure which databases this is  
2 referring to, but the, if you want to call our emissions  
3 assessment a database; this is based upon EPA emission  
4 factors. The meteorological database is based upon a  
5 first-order meteorological station. These things are pretty  
6 standard inputs, databases, if you wish, to a model of this  
7 nature.  
8 Q And when you say meteorological station, I don't  
9 think we've really talked about that in this case. What do  
10 you mean by that?  
11 A The source of meteorological data, National  
12 Airport meteorological records, hour-by-hour data; these --  
13 we have databases that are generated by authoritative bodies  
14 and reviewed.  
15 Q The one that you used was National Airport?  
16 A Correct.  
17 Q Okay. Appropriate performance evaluations of the  
18 model have shown that the model is not biased toward  
19 underestimates.  
20 A Again, model performance evaluation required  
21 measured data, which is usually done by tracer studies for  
22 model development. For this matter here, there would be no  
23 possible way, or any application that hasn't been built yet,  
24 to show for that specific site what the model performance  
25 would be. This is a model validation procedure.

Page 235

1 Q And a protocol on methods and procedures to be  
2 followed has been established -- did you establish a  
3 protocol?  
4 A We established a report to document what we did.  
5 Q So the report is the protocol, is that --  
6 A The report documents that we -- we don't have a  
7 protocol step with a reviewing agency involved. We don't.  
8 We have the report that describes the references and the  
9 foundation for what we've done and the results.  
10 Q For purposes of this case, the Hearing Examiner  
11 and ultimately the Board of Appeals essentially have to  
12 stand in the shoes of the EPA's regional office and  
13 determine whether the alternative model that you have come  
14 up with is acceptable under these factors, is that correct?  
15 A No.  
16 Q Do they --  
17 A You say -- I have not developed an alternative  
18 model, and so I don't agree with your premise.  
19 Q Okay. They ultimately do have to determine  
20 whether or not the model that you've provided is acceptable?  
21 A They have to determine if the modeling results  
22 that I've generated are acceptable.  
23 Q And the modeling results depend on the methods  
24 that you use, is that correct?  
25 A That is correct.

Page 236

1 Q And the modeling results depend on the data that  
2 you enter, is that correct?  
3 A They do.  
4 Q And the modeling results depend on whether or not  
5 the OLM, the ozone limiting method itself, is applicable to  
6 this particular source of emissions, is that correct?  
7 A Not completely, no.  
8 Q Excuse me?  
9 A That's not completely correct. We have modeled  
10 this location, this facility a number of different ways.  
11 For example, we showed, we showed Stage I in the rebuttal  
12 report based upon NOx modeling; it's very conservative  
13 modeling. We showed Stages II and III, NO2, one-hour, based  
14 upon the application of OLM. So we have done it several  
15 different ways.  
16 Q On page 28 of your rebuttal report, you state that  
17 the OLM method was developed for stack sources, primarily  
18 power plant stacks. This station is not a power plant or  
19 otherwise have a stack, is that correct?  
20 A Which version of the report? Are you looking at  
21 the redlined version or the --  
22 Q I'm looking at your rebuttal report. Let me see.  
23 MR. GROSSMAN: Page?  
24 BY MS. ROSENFELD:  
25 Q Appendix B-1. It's on page 27, the second full

Page 237

1 paragraph: The OLM method was developed for stack sources,  
2 primarily power plant stacks.  
3 A Correct.  
4 Q This station is not a power plant and does not  
5 otherwise have a stack, is that correct?  
6 A It does, it does have a, it does have a stack.  
7 Some sources do not have stacks, but we have a vent that's  
8 going to stack. We treated the loading dock truck emissions  
9 as a pseudo stack. So it has a stack and it has area  
10 sources.  
11 Q The next sentence, you say: The application for a  
12 relatively large ground-based area source is not a, is not a  
13 standard application. Is that correct?  
14 A That is correct.  
15 Q What makes it not standard?  
16 A Well, two, two issues: one, the methodology is  
17 primarily used for stack sources that have substantial time  
18 for the plume to mix with the ozone and the ambient air. In  
19 this case here, the second main point is, we're modeling  
20 inside a source. We're modeling inside a gas queue source  
21 itself, which, by definition, can't have complete mixing  
22 between the outside ambient air, the ozone, and the material  
23 inside the source. So in that context, applying OLM to that  
24 kind of application, it is, it is -- it's not a typical  
25 application of the model.

Page 238

1 Q The first question I asked you went to the first  
2 sentence, which said: The OLM method was developed for  
3 stack sources, primarily power plant stacks. And I asked  
4 you if the station was a power plant or if it otherwise had  
5 a stack, and I thought you sort of qualified that answer,  
6 but then you just said that the methodology here is  
7 different because you're not dealing with stack sources.  
8 Which is it?  
9 A Well, I said we had both. We have stack sources,  
10 and we have, we have area sources. What I was referring to  
11 in the second part of my response was that the area sources,  
12 like the gas queue, that's not a stack, and we have  
13 receptors inside the source, and so in order to apply the  
14 OLM method, some judgment is required.  
15 Q You said the area source was the gas queue, and  
16 what did you consider to be a stack source?  
17 A As I mentioned, the vent from the tank, the  
18 underground tank, is a stack source, and the loading dock  
19 emissions were treated as a stack source.  
20 Q And why did you treat the loading dock  
21 differently?  
22 A Loading dock emissions are coming from the stack  
23 of the heavy-duty diesel vehicles or the trucks themselves.  
24 They are -- they're coming from a point. They aren't coming  
25 from an area. We, as we said in the protocol, simplified it

Page 239

1 to having one stack in the center of the gas queue.  
2 Q And when the OLMF -- the OLM method in the first  
3 paragraph on page 27 of your report where you say it was  
4 developed for stack sources, primarily power plant stacks,  
5 what's the typical height, or is there an average height of  
6 a power plant stack?  
7 A I don't know off the top of my head what the  
8 average height is, but they're tall stacks, typically.  
9 Q Have you ever studied one?  
10 A Yes.  
11 Q And what was the height of --  
12 A It varies tremendously. I mean, you're asking a  
13 range?  
14 Q And what is the range?  
15 A The Mirant Power Plant had stacks in Alexandria  
16 just barely above the top of the building, which I don't  
17 remember exactly the height, but they weren't very high, and  
18 you have some stacks that may be 200 meters high. So it  
19 varies quite a bit.  
20 MR. GROSSMAN: And you called the loading dock a  
21 pseudo stack. Is there a definition of stack in your  
22 business?  
23 THE WITNESS: A stack, yeah, a stack would be  
24 where emissions are coming out of a confined point, one  
25 clearly defined point with a known area.

Page 240

1 MR. GROSSMAN: It doesn't have to be a certain  
2 height, or it doesn't have to be above ground, or it does  
3 have to be above ground?  
4 THE WITNESS: It'll be above ground, but --  
5 MR. GROSSMAN: Well, is the vent from -- does the  
6 vent from the gas tank, underground gas tank, does that  
7 qualify as being above --  
8 THE WITNESS: It has a, I don't remember the exact  
9 height, 10 or -- maybe a 10-foot or so vent that does  
10 discharge above ground level.  
11 MR. GROSSMAN: I see. Okay.  
12 BY MS. ROSENFELD:  
13 Q And what is the height of the stacks on the trucks  
14 at the loading dock?  
15 A I'd have to look in the report, but it's fairly  
16 low. I don't, I don't recall off the top of my head.  
17 Q Do you have that identified in your report?  
18 A I may. I'll look. I don't, I don't see it handy.  
19 I could, I could give you an approximation.  
20 Q Sure.  
21 A I want to say on the order of 10, eight, 10 feet,  
22 but it's in our modeling files. I'd direct you to our data  
23 disks that explains, that shows the exact height that was  
24 used.  
25 Q And what did you estimate the height of the

Page 241

1 vehicle emissions from the vehicles in the queues to be?  
2 A The midpoint height was .75 meters.  
3 Q And do you know what that is in feet? The other  
4 numbers you gave me were in feet.  
5 A Two-and-a-half, three feet, approximately.  
6 MR. GROSSMAN: While they're cogitating,  
7 Mr. Sullivan, have you seen other applications of the OLM  
8 method, other than this case?  
9 THE WITNESS: I have. In the literature, it does  
10 describe them.  
11 MR. GROSSMAN: Have you had occasion to use it  
12 yourself before?  
13 THE WITNESS: We may have at one point a long time  
14 ago but not recently. I mean, there hasn't been a real  
15 strong need in the past, because the past is a one-hour NO2  
16 standard; in many cases, it's quite easy to achieve the NO2  
17 standard.  
18 MR. GROSSMAN: Okay.  
19 THE WITNESS: So in the study in 2010, it became a  
20 different ball game.  
21 MR. GROSSMAN: But in the literature, you say,  
22 you've seen the OLM method applied?  
23 THE WITNESS: I have.  
24 MR. GROSSMAN: And in that literature did the EPA  
25 approve the application of the OLM method?

Page 242

1 THE WITNESS: The application I'm thinking about  
2 were published. I know one of them was published. The  
3 second one may have been published as well. They're  
4 referred to by EPA in the Fox, Tyler Fox, March 1st, 2011,  
5 document, and he mentions the application in Atlanta,  
6 Georgia, applied to roadway networks and he mentioned an  
7 example in Alaska for a power plant that had fairly short  
8 stacks. So there's a couple of examples that were  
9 referenced there by EPA.

10 MR. GROSSMAN: Right. I see on page 7 of that  
11 document, which is Exhibit 407, the first full paragraph  
12 begins with: These preliminary model evaluation results  
13 also serve to highlight a point worth emphasizing, which is  
14 that PVMRM option in AERMOD is not inherently superior to  
15 OLM option for purposes of estimating cumulative ambient NO2  
16 concentrations.

17 I mean, I point that, that out to you, too,  
18 Ms. Rosenfeld, and I just, I just ask, is that -- I want to  
19 know what the evidence is that this is not an acceptable, a  
20 scientifically acceptable method. Whether it's applied here  
21 appropriately or not, I understand and I'm giving you leeway  
22 to go into examining the witness on that point, as you are,  
23 but for the underlying question, the evidentiary question  
24 you raised, I want to hear any evidence you have on that  
25 point, because it appears to me in the literature that, that

Page 243

1 EPA does accept the use of that methodology.  
2 BY MS. ROSENFELD:  
3 Q You had mentioned that -- one more question before  
4 I move on. Is there, are there different plume heights  
5 between the stack of a power plant, for example, in the  
6 standard OLM application of this modeling as opposed to the  
7 plume height for the vehicle emissions that you've modeled?  
8 A There clearly are differences in heights.  
9 Q Can you give me a, sort of a range?  
10 A Well, I think I mentioned it. We modeled the  
11 motor vehicle as basically one-and-a-half-meter, five-foot  
12 heights and put a midpoint of .75 meters. Power plant  
13 stacks often are 100 meters or more.  
14 Q Yes, but I was asking about the plume.  
15 A Well, the, I mean, they're probably 3 or 400  
16 meters for the plume from a power plant, but to clarify and  
17 get back to Mr. Grossman's question, the methodology has  
18 been applied to short stacks, such as the -- the power plant  
19 in Alaska had, had very low stacks that were down-washed by  
20 the building, and the application in Atlanta was for cars,  
21 roadways.  
22 So this is not the first time it's been applied to  
23 roadways. The biggest difference is this time we're  
24 applying it with the receptors inside the source. So that  
25 requires, as I'm saying, some judgment. We can't just

Page 244

1 blindly use a model, ignoring the fact that if we applied  
2 OLM directly and applied it to every receptor, that we would  
3 violate the conditions of OLM, which requires we have  
4 uniform mixing to the molecular level. It's theoretically  
5 impossible to have that inside a source itself or  
6 immediately near the, near the source. It takes a long  
7 travel time, as I indicated in many of my references.  
8 Q You had identified the Alaska study, and I think  
9 you also said that there have been some OLM reports in your  
10 references. Could you identify those for me, please?  
11 A They're in the Fox 2011 document that we had  
12 earlier. I can search for the page numbers, but they, they  
13 discuss both of them, those two examples. On page 7, for  
14 example, the bottom of page 7, they talk about the Atlanta  
15 application to mobile sources, and also in here they  
16 describe --  
17 Q I'm sorry. I'm sorry. You're going to have to  
18 let me catch up. On the bottom of page 7 of Exhibit 407?  
19 A I'm not sure of the exhibit number.  
20 MR. GROSSMAN: Yes, it is, Exhibit 407. It's what  
21 I --  
22 BY MS. ROSENFELD:  
23 Q And where --  
24 MR. GROSSMAN: -- it's the page I just read from.  
25 I read the first --

Page 245

1 MS. ROSENFELD: You did read that, but I'm not  
2 sure that -- my question for him was where, where did he  
3 find the studies where OLM was used to apply to something  
4 other than a stack.  
5 THE WITNESS: I reviewed -- these studies are  
6 available on the Internet. I did review them.  
7 BY MS. ROSENFELD:  
8 Q Are they listed in the Tyler Fox memos?  
9 A I believe that they are.  
10 Q Okay. If you could identify them for me, please.  
11 A Well, perhaps he didn't list them as references,  
12 but I looked on --  
13 MR. GROSSMAN: He lists references on pages 21 and  
14 22. I don't know --  
15 THE WITNESS: Right.  
16 MR. GROSSMAN: -- if it's among those.  
17 THE WITNESS: I don't, I don't see it here, but if  
18 you search online, like I have done, they're online.  
19 BY MS. ROSENFELD:  
20 Q I'm not looking to search online. I'm asking you  
21 -- Mr. Grossman asked you a very specific question: Have  
22 you reviewed studies or reports that apply the OLM method in  
23 other settings? And you said yes, and you generically  
24 referenced studies --  
25 A I can give you the --

Page 246

1 Q -- and now you're inviting me to go online and  
2 look for them. I'm --  
3 A I'll give you the reference.  
4 Q Thank you.  
5 A It's, the Atlanta study is described --  
6 Q And you're looking where?  
7 A I'm looking at a document I pulled off the  
8 Internet. I'll give you the reference. It's  
9 [http://www.epa.gov/ttn/naaqs/standards/nox/data/20081121\\_no2\\_rea\\_final.pdf](http://www.epa.gov/ttn/naaqs/standards/nox/data/20081121_no2_rea_final.pdf).  
10  
11 Q Final dot what?  
12 A PDF.  
13 MS. ADELMAN: PDF.  
14 BY MS. ROSENFELD:  
15 Q PDF. And the very beginning of that? I got up to  
16 .gov. Can you read up until .gov?  
17 A Sure. It's [www.epa.gov/ttn](http://www.epa.gov/ttn).  
18 Q Got it. Okay. And that study reflects what in  
19 your opinion?  
20 A That study is showing, is using the, I think they  
21 compared -- if I recall correctly, they compared it to two  
22 different options for the highway network in Atlanta,  
23 Georgia.  
24 Q And which two options were compared?  
25 A Well, OLM clearly was in there. I believe it was

Page 247

1 OLM and PVMRM.  
2 MR. GROSSMAN: If it helps, on the bottom of page  
3 7 of Exhibit 407, this following sentence occurs:  
4 Furthermore, the OLM option with OLMGROUP ALL was used to  
5 estimate NO2 concentrations from mobile source emissions  
6 modeled as area sources for the Atlanta area as part of the  
7 EPA's Risk and Exposure Assessment, parens, REA, for the  
8 most recent NO2 NAAQS review, and that's parens, EPA comma  
9 2008. And --  
10 MS. ROSENFELD: Bottom of page 7 of which exhibit?  
11 MS. ADELMAN: 407.  
12 MR. GROSSMAN: This is 407. Then it goes on to  
13 page 408, which I continued reading, and it says: Results  
14 of model-to-monitor comparisons from the REA show generally  
15 good performance, suggesting that the use -- that use of OLM  
16 with OLMGROUP ALL is appropriate for modeling such  
17 emissions.  
18 BY MS. ROSENFELD:  
19 Q And, Mr. Sullivan, in your modeling did you use  
20 the OLMGROUP ALL?  
21 A We tested it both ways.  
22 Q Is it in your rebuttal report? Is that --  
23 A No.  
24 Q Are the results of that analysis in your rebuttal  
25 report?

Page 248

1 A They are not.  
2 Q Okay.  
3 MR. GROSSMAN: What is OLMGROUP ALL?  
4 THE WITNESS: The difference between the two  
5 methods, OLM will evaluate each source separately to see how  
6 much, how much ozone is available, but OLMGROUP ALL looks at  
7 all the sources together -- in the ring road, the loading  
8 dock, and the rest -- and the bottom line is the OLMGROUP  
9 ALL option produces substantially lower impacts than OLM,  
10 and it's more accurate. We used OLM in the heart of our  
11 report because it's more conservative, but it makes a large  
12 difference in the results.  
13 BY MS. ROSENFELD:  
14 Q And in addition to the one report that you just  
15 cited --  
16 MS. CORDRY: While she's looking at that,  
17 Mr. Sullivan, if I'm understanding, are you referring --  
18 MR. GROSSMAN: No, no, no, no, no.  
19 MS. CORDRY: Could I --  
20 MR. GROSSMAN: No. No.  
21 MS. CORDRY: -- I'm just trying to find --  
22 MR. GROSSMAN: No.  
23 MS. CORDRY: -- the citation he's talking about.  
24 MR. GROSSMAN: No. Well, you can get citations  
25 offline.

Page 249

1 MS. CORDRY: Well, okay, I'm trying --  
2 BY MS. ROSENFELD:  
3 Q Do you have any other studies or reports, in  
4 addition to the one that you just gave me from Alaska, in  
5 response to Mr. Grossman's question about sources of  
6 authority for using the OLM?  
7 A Well, I'm using the source, the primary source of  
8 authority, EPA's guidance, especially March 1st, 2011, but I  
9 did, I did provide, and they provide two examples, which I  
10 have reviewed, which, which demonstrate EPA has used that  
11 methodology in rule-making. So it's been through peer  
12 review. I also provided probably 10 references that support  
13 the use of the method for this application, including how  
14 quickly mixing occurs between the ozone and the ambient air  
15 with plumes and so forth. So I provided quite a few  
16 documents to support the use of this method in this  
17 application.  
18 Q I'm looking on your, in your rebuttal report,  
19 Exhibit 466, starting on page 21 and going through page 22,  
20 your references. Which of these references deal with  
21 ground-level sources?  
22 A I'd have to go through them one by one. So do you  
23 want me to go through them one by one?  
24 Q Yes.  
25 A Well, Fox, the Fox, March 1st, 2011, clearly does

Page 250

1 because I just described that.  
2 Q I'm sorry. My --  
3 A Fox --  
4 Q -- my question was, where, which of these sources  
5 reference ground-level application of OLM?  
6 A Well, most of these references describe greater  
7 mixing between the ambient air and the plume itself. The  
8 references that describe the other applications of OLM are  
9 contained in Fox 2011. The rest of these documents are  
10 related to peer-reviewed documents on the fact that the  
11 change, the change in the ratio of NO2 occurs slowly, and  
12 that's what these documents do to support the application  
13 for this, use of the method for this application.  
14 Q But that's not the question that I asked. I  
15 asked, which of these references document use of the ozone  
16 limiting method to ground-level sources?  
17 A Fox 2011.  
18 MR. GROSSMAN: That's the, just for clarity,  
19 that's the reference at the end of page 7, the Atlanta  
20 mobile source emissions, which is what's the -- the bottom  
21 of page 7 and onto page 8.  
22 MS. ROSENFELD: Mr. Grossman, I'm really not  
23 trying to be obtuse here. I just don't see that --  
24 MR. GROSSMAN: Okay.  
25 MS. ROSENFELD: -- on page 7. I have Exhibit 407,

Page 251

1 is that correct?  
2 MR. GROSSMAN: Yes.  
3 MS. ROSENFELD: And we're on -- okay.  
4 MR. GROSSMAN: Bottom of page 7.  
5 MS. ROSENFELD: Right.  
6 MR. GROSSMAN: Furthermore.  
7 MS. ROSENFELD: Yes.  
8 MR. GROSSMAN: The last sentence on the bottom --  
9 MS. ADELMAN: The very last sentence.  
10 MR. GROSSMAN: -- of the page begins with  
11 furthermore. Do you see that?  
12 MS. ROSENFELD: I got it. Okay.  
13 MR. GROSSMAN: Okay.  
14 MS. ROSENFELD: For the Atlanta area.  
15 MR. GROSSMAN: Right.  
16 MS. ROSENFELD: Okay.  
17 BY MS. ROSENFELD:  
18 Q And, Mr. Sullivan, to your knowledge, is that  
19 study in the record of this case?  
20 A The Atlanta study is not in the record. I mean,  
21 it's -- the study is available.  
22 Q Okay. And aside from that one Atlanta study, do  
23 you have any other source of EPA review or approval of a  
24 ground-level application of the ozone limiting method?  
25 A Well, I mentioned the Alaska work done by

Page 252

1 Dr. Steve Hanna. That was for a low stack in Alaska with  
2 very low stack heights. I believe it was referenced in Fox,  
3 but yeah, that one I have reviewed, and that used the ozone  
4 limiting method as well.  
5 Q And would those low stack heights be more  
6 comparable to the vehicle emission heights of two-and-a-half  
7 or three feet or closer to what you called the pseudo stacks  
8 of the trucks at the loading dock and the vent?  
9 A The stacks, if I -- I'll just give you a rough  
10 estimate, probably 30 feet high. So they're more, they're  
11 closer to the truck loading dock heights than the, the car  
12 heights.  
13 Q So that Alaska study, in fact, was in fact higher  
14 than even the pseudo stacks that you were --  
15 MR. GROSSMAN: I think he only characterized the  
16 loading dock as a pseudo stack. He characterized the vent  
17 as a stack. Am I correct, Mr. Sullivan?  
18 THE WITNESS: That's true. That's correct.  
19 BY MS. ROSENFELD:  
20 Q You've mentioned several times that in this case  
21 the receptors are inside the source and that that makes this  
22 a unique situation. Once we get past the modeling phase,  
23 assuming the gas station is built, the receptors that you're  
24 talking about will be the people inside the queue, is that  
25 correct?

Page 253

1 A That's correct.  
2 Q And so, by analogy, what you're saying is,  
3 typically, you would not model the -- you wouldn't assume  
4 that a person would be inside a power plant stack, is that  
5 correct, when you say you generally don't model a receptor  
6 inside a stack?  
7 A Well, I meant, as a general statement, in EPA's  
8 guidance, such as doing roadway analysis, and they don't,  
9 they recommend not putting receptors in the roadway or on  
10 the sidewalks. Analogous to that, we have a transient queue  
11 source. I've already made the point, which isn't shown  
12 directly in my modeling this time, that people aren't there  
13 for an hour; they're in and out --  
14 Q That wasn't my question.  
15 A -- but to finish my statement, basically, EPA does  
16 not require, it's not done. So in that context, putting  
17 receptors inside a source is unusual. We've done it because  
18 the question came up here and I tried to be responsive to  
19 it, but to do that, I have to apply methodology, such as  
20 OLM, consistent with its underlying assumptions. And one of  
21 those assumptions which is very important to this  
22 application, it has to have uniform mixing between the  
23 outside ozone and the plume itself.  
24 Q I'm not asking about the science right now. I'm  
25 really --



Page 254

1 MR. GROSSMAN: Yes, let's not go too far afield in  
2 terms of a response and --  
3 BY MS. ROSENFELD:  
4 Q You do agree that the receptors inside the mall  
5 need to comply with the NAAQS, just as the receptors at the  
6 home and the school and the pool, is that correct?  
7 A I don't agree with --  
8 MR. GROSSMAN: I don't know if I understand it,  
9 but the receptors inside the mall lead to?  
10 MS. ROSENFELD: Need --  
11 MS. ADELMAN: Need.  
12 MR. GROSSMAN: Oh, need.  
13 MS. ROSENFELD: -- to comply --  
14 MS. ADELMAN: Need.  
15 MR. GROSSMAN: Oh, okay.  
16 MS. ROSENFELD: -- with the NAAQS.  
17 BY MS. ROSENFELD:  
18 Q It's not treated differently, correct?  
19 MR. GROSSMAN: Okay.  
20 THE WITNESS: What I'm saying is, in application,  
21 I've never --  
22 BY MS. ROSENFELD:  
23 Q That's not --  
24 A It's important. I'm saying, when EPA -- when I've  
25 modeled for EPA for a permit, they do not require putting

Page 255

1 receptors in the street, for example, or in the middle of a  
2 transient source.  
3 MR. GROSSMAN: No, but let's try to answer her  
4 question. She's asking whether or not the receptors that  
5 are in the mall, I presume, are also important in terms of  
6 complying with the NAAQS standards.  
7 THE WITNESS: Inside the mall being inside the  
8 mall building or in the parking lot?  
9 MR. GROSSMAN: No, no, I think inside the parking.  
10 BY MS. ROSENFELD:  
11 Q On the mall parcel.  
12 MR. GROSSMAN: On the parcel.  
13 THE WITNESS: Well, I think it depends. I mean,  
14 if we're talking about, for example, annual average NAAQS,  
15 let's say PM2.5, would a location in the middle of the gas  
16 queue be reasonable? I haven't seen a modeling application  
17 I've done being reviewed by any agency that would make a  
18 judgment, saying you can't build this here because you're  
19 going to violate the ambient standard -- annual standard in  
20 a transient air like a gas queue. That would be -- some  
21 judgment is required in the plan model.  
22 BY MS. ROSENFELD:  
23 Q But as you've acknowledged repeatedly, this is not  
24 an EPA regulatory proceeding; this is a --  
25 A But I think common sense applies.

Page 256

1 Q No. No. I'm asking the questions. In this case,  
2 we're dealing with a special exception application, correct?  
3 A That's correct.  
4 Q And the Hearing Examiner and ultimately the Board  
5 of Appeals, in order to approve this, needs to find that  
6 there will not be an adverse health effect on the health,  
7 safety, and welfare, or the health and safety of workers,  
8 visitors, and employees in the area of the special exception  
9 application. Is that your understanding?  
10 A That is.  
11 Q And Costco, the applicant, has come forward and  
12 said the measure, the ruler that we will use is whether or  
13 not ambient air quality standards will meet or not meet the  
14 National Ambient Air Quality Standards, is that correct?  
15 A That is correct.  
16 Q And you have used that ruler to measure public  
17 health with respect to the school, the pool, the homes, and  
18 the mall parcel, am I correct?  
19 A Well, yes, but to clarify --  
20 Q Yes.  
21 A Well, it's not a yes-or-no response.  
22 Q That is a yes-or-no. Is that the measure --  
23 A I'll leave a confused record if I answer yes or  
24 no.  
25 Q Is that the measure that you have chosen?

Page 257

1 A Not in every case. I mean, if you look at my  
2 protocol --  
3 Q If that's --  
4 A Well, let me finish.  
5 Q Well, then I would like to hear.  
6 MR. GOECKE: Can he finish, Mr. Grossman?  
7 BY MS. ROSENFELD:  
8 Q I would like to hear your answer.  
9 MR. GROSSMAN: Yes. All right.  
10 THE WITNESS: The November protocol makes it very  
11 clear that for 24-hour and annual averages, that, in our  
12 judgment, for this application it doesn't make sense to  
13 consider receptors inside the mall that will not be there  
14 for that entire period of time, and the process can evaluate  
15 that as they see fit. I'm saying common sense is part of  
16 the general EPA application of models relative to the  
17 standards. I can't decide how they're going to review it,  
18 but I'm saying that if it's a PM2.5 annual standard, does it  
19 make sense to assume that somebody will be in the middle of  
20 the gas queue for a year? My judgment, it does not, and I  
21 made that very clear in the report for November 2012.  
22 BY MS. ROSENFELD:  
23 Q But my question was different. My question was,  
24 has the applicant chosen the National Ambient Air Quality  
25 Standards as the measure against which you're going to

Page 258

1 assess health impacts?  
2 MR. GROSSMAN: Well, I do have a problem with that  
3 because he's not the applicant. He's a witness. He can  
4 answer what he did --  
5 MS. ROSENFELD: Okay.  
6 MR. GROSSMAN: -- in evaluating things, and I  
7 think he's just said that this is -- the standard that he  
8 applied is generally the NAAQS standard but there are  
9 certain areas where, he says, it doesn't make common sense  
10 to apply it. I think that's what he said, but he can't  
11 speak for the applicant.  
12 MS. ROSENFELD: That's fair.  
13 BY MS. ROSENFELD:  
14 Q Has it been your goal through your modeling  
15 process to make a determination as to whether or not the  
16 emissions levels will meet or violate the National Ambient  
17 Air Quality Standards at the home, the school, the pool, and  
18 within the mall parcel?  
19 A Yes, as I just, as I just stated, with the caveat  
20 about 24-hour averaging and annual averaging. I mean, I  
21 stand by that statement. I've --  
22 Q I heard that.  
23 A -- answered that question.  
24 Q In your earlier testimony in this case, you stated  
25 several times, I think, that you thought the Hearing

Page 259

1 Examiner was really limited to application of the EPA  
2 standards, that for him to do otherwise would be arbitrary,  
3 is that correct?  
4 A Is it in the transcript? I don't recall using  
5 those exact words.  
6 Q Okay.  
7 MR. GROSSMAN: I don't recall him saying anything.  
8 It may have been argued, but it's possible.  
9 MS. CORDRY: We'll find it for you, Your Honor.  
10 MR. GROSSMAN: Okay. It's been a long time.  
11 MR. SILVERMAN: And many reports.  
12 BY MS. ROSENFELD:  
13 Q You have testified and you've affirmed in your  
14 reports that, in your opinion, you're following EPA guidance  
15 and regulations in your modeling, is that correct?  
16 A I've stated, I've stated that with the, with the  
17 caveat that part of the guidance does say to seek the most  
18 accurate answer, which does provide discretion to the  
19 analyst to use judgment; that the guidance is not fixed to  
20 the point you can't use judgment for a particular  
21 application.  
22 Q So is it fair to say that you followed EPA  
23 guidance except when you decided to deviate from EPA  
24 guidance?  
25 A No, that's not what I'm saying. Let me, let me

Page 260

1 find the quote of what I actually did, because that's not,  
2 that's not it, because what the guidance says, I'd like to  
3 read it onto the record --  
4 Q I'm sorry. What are you reading from?  
5 A I'm reading from Appendix W.  
6 Q Yes.  
7 A And let me find the exact citation.  
8 MR. GROSSMAN: What's the page reference?  
9 THE WITNESS: Section 1.0, paragraph -- it's on  
10 68230, Section D: The model that most accurately estimates  
11 concentrations in the area of interest is always sought.  
12 However, it is clear from the needs expressed by the states  
13 and EPA regional offices, by many industries and trade  
14 associations, and also by the deliberations of Congress,  
15 that consistency in the selection and application of models  
16 and data bases should also be sought, even in case-by-case  
17 analysis. And they go on to talk about consistency and the  
18 benefits of it, but what they're saying is, you don't apply  
19 consistency at the expense of accuracy.  
20 MR. GROSSMAN: Well, you didn't get down to the,  
21 two sentences down.  
22 BY MS. ROSENFELD:  
23 Q And you could read, yes, would you read the last  
24 two sentences of that same subsection (d), please?  
25 A Sure. Consistency ensures that air quality

Page 261

1 control agencies and the general public have a common basis  
2 for estimating pollution concentration, assessing control  
3 strategies, and specifying emission limits. Such  
4 consistency, however, is not, however, promoted at the  
5 expense of model and data base accuracy. The guidelines  
6 provides a consistent basis for the selection of the most  
7 accurate models and data bases for use in air quality  
8 assessment.  
9 Q So the touchstone really is, are the standards and  
10 the protocols that are set out in the guideline, correct?  
11 A What do you mean by touchstone?  
12 Q The first place that you look for your modeling  
13 assumptions is, are the protocols that are set out in the  
14 guideline, Appendix W, is that correct?  
15 A Well, you look at EPA guidance, and you ensure  
16 that you're following the overarching goal of not  
17 sacrificing accuracy at the expense of conformity.  
18 MR. GROSSMAN: Yes, we've been over this lots of  
19 times already. So let's, let's move along.  
20 BY MS. ROSENFELD:  
21 Q Okay. Let me go back to my earlier line of  
22 questioning. I'm looking at the June 17th, 2013,  
23 transcript, and I'd like to read from the transcript. This  
24 is testimony -- this question actually was posed by  
25 Mr. Goecke on line 11 of page 173:

Page 262

1 Okay. And then, if not, would it be arbitrary or  
2 at least unfair for Mr. Grossman to hold Costco to a  
3 standard based on the expert evidence presented by the  
4 opposition?  
5 Mr. Sullivan -- it says Silverman, but I'm pretty  
6 sure it's Sullivan. Mr. Silverman -- it was Mr. Silverman  
7 -- objection. He's not really a judge of fairness. He's a  
8 judge of standards, is all.  
9 Mr. Grossman: Well, that's true in a sense, but I  
10 guess you could take my word on fair and say would that be  
11 an inappropriate way from an expert's standpoint to evaluate  
12 it. I think that's what I was getting at in the question.  
13 So go ahead and answer that.  
14 The Witness -- and this is Mr. Sullivan -- they,  
15 of course, they do; they do add to some volatile organic  
16 emissions. We've quantified all of that.  
17 Okay. Hold on. I'm sorry. I've skipped a page.  
18 MR. GOECKE: Michele, which day is this from?  
19 June what?  
20 MR. BRANN: June 17th.  
21 MS. ROSENFELD: June 17.  
22 MS. HARRIS: And the page number again?  
23 MR. GOECKE: Can I have the page number again?  
24 MS. ROSENFELD: Yes, page 173.  
25 BY MS. ROSENFELD:

Page 263

1 Q And I'm starting now, in other words, and I'm  
2 starting on 173, page, line 24:  
3 In other words, if there's the standard, the  
4 applicant is going to try to see if they're above or below  
5 the standard. If they're above the standard, they'll  
6 install more controls to get below the standard. That's how  
7 the air emission business works, but if there's no standard,  
8 it would have to be arbitrary because there's no basis on a  
9 quantifiable benchmark for a decision.  
10 MR. GOECKE: Is there a question on that?  
11 MS. ROSENFELD: In just a minute.  
12 BY MS. ROSENFELD:  
13 Q And then to go further in that same transcript to  
14 pages 195 and 196, and this is Mr. Sullivan yet again:  
15 We have to come up with control methods that will  
16 reduce these emissions so it's acceptable --  
17 MR. GOECKE: I'm sorry. What line are you on?  
18 MS. ROSENFELD: 196, I'm starting on the first  
19 line. halfway through that line.  
20 BY MS. ROSENFELD:  
21 Q We have to come up with control methods that will  
22 reduce these emissions, those emissions so it is acceptable,  
23 but if we don't know what the standard is, how can we  
24 approach that problem?  
25 So if the position is, well, EPA standards aren't

Page 264

1 acceptable enough, well, what's Costco supposed to do? What  
2 are they supposed to look at for guidance to try to further  
3 reduce their emissions? There's nothing they can do. So  
4 decisions that are made absent any kind of objective  
5 standards, as I mentioned earlier, would seem to me to be  
6 arbitrary. It could be different from one application to  
7 another because there's no standard or objective benchmark  
8 to compare the numbers to.  
9 Going down to line 20 on that same page --  
10 MR. GROSSMAN: Well, I think you, I think you've  
11 made your point --  
12 MS. ROSENFELD: Okay.  
13 MR. GROSSMAN: -- they have suggested that there  
14 is, there should be some objective benchmark.  
15 MS. ROSENFELD: That's right.  
16 MR. GROSSMAN: I don't consider those benchmarks  
17 necessarily binding on me in the sense that I could think  
18 that something could affect health that goes beyond it, but  
19 it's certainly a significant guideline for me in evaluating  
20 the case, and I think they've approached it the same way.  
21 So --  
22 MS. ROSENFELD: And it's --  
23 MR. GROSSMAN: I don't know where this is --  
24 MS. ROSENFELD: Well, it's certainly been our  
25 position that we think that there are adverse health effects

Page 265

1 even below the National Ambient Air Quality Standards.  
2 MR. GROSSMAN: I understand that, and --  
3 MS. ROSENFELD: But my --  
4 MR. GROSSMAN: -- I'm not saying you're wrong  
5 about that. I haven't made any final decisions, but I think  
6 that we're appropriately approaching the case by looking to  
7 the EPA guidelines as a first step, at the very least, of  
8 evaluating these things. So I think that's an appropriate  
9 methodology.  
10 BY MS. ROSENFELD:  
11 Q And that goes back to my, my question earlier  
12 which was that in order to ensure that lack of  
13 arbitrariness, you really do need to conform to the guidance  
14 as set forth in the EPA guidelines, isn't that correct?  
15 A Yes, that's correct, as I've stated, but it would  
16 be the guidelines in their totality. We don't just look at  
17 every single recommendation and ignore the fact that we're  
18 applying it to a specific application. The guidance says  
19 what it says. You read it. It's more than that. Your goal  
20 is to be accurate, and you conform to the sense you can but  
21 not at the expense of accuracy.  
22 MR. GROSSMAN: Okay. So we've gone over that.  
23 Okay. Let's --  
24 BY MS. ROSENFELD:  
25 Q And my question for you is, how -- when you

Page 266

1 deviate from the EPA standards, how is the Board of Appeals  
2 to know that that's a reasonable deviation?  
3 A I haven't deviated in EPA standards. EPA  
4 standards are the National Ambient Air Quality Standards.  
5 They are what they are.  
6 Q When you deviate from the modeling protocols, how  
7 is the Board of Appeals to know that that deviation from the  
8 modeling protocols and the guidelines is a reasonable  
9 deviation?  
10 A From the modeling protocol or the EPA's  
11 guidelines?  
12 Q The EPA's guidelines.  
13 A I haven't deviated from the EPA's guidelines.  
14 Q And so it's your testimony that application of the  
15 ozone limiting method in this case is not a deviation from  
16 EPA guidelines?  
17 A That's correct.  
18 Q Okay.  
19 A At some point, Mr. Grossman, when there's good,  
20 convenient time, I'd like to have a break.  
21 MR. GROSSMAN: I think that's fair. Let's take a  
22 break for five minutes, maybe even seven minutes.  
23 THE WITNESS: That'd be good.  
24 MR. GROSSMAN: Okay.  
25 (Whereupon, a brief recess was taken.)

Page 267

1 MR. GROSSMAN: We're back on the record.  
2 Scheduling.  
3 MS. HARRIS: Thank you. So one question is, who  
4 else is the opposition intending to call, and also, we had  
5 previously indicated that Mr. Sullivan is not available on  
6 the 20th, and I'm a little --  
7 MR. GROSSMAN: The next session we have is on the  
8 12th. So --  
9 MS. HARRIS: 12th, right, but Ms. Rosenfeld also  
10 indicated she had four more hours of cross for Mr. Sullivan.  
11 MR. GROSSMAN: I'm sure she'll shorten it up, but  
12 that'll be -- we'll finish with him on the 12th then.  
13 MS. HARRIS: And then we have Dr. Cole.  
14 MS. ROSENFELD: I would expect to finish  
15 Mr. Sullivan's cross-examination on Monday.  
16 MR. GROSSMAN: Pardon me?  
17 MS. ROSENFELD: I would expect to finish  
18 Mr. Sullivan's --  
19 MR. GROSSMAN: You dropped the last sound on the  
20 last word. So I didn't --  
21 MS. ROSENFELD: Sorry. I would expect to finish  
22 Mr. Sullivan's cross on Monday and that --  
23 MR. GROSSMAN: Yes, maybe Monday, real early.  
24 MS. ADELMAN: Mr. Sullivan has some questions. I  
25 mean, Mr. --

Page 268

1 MR. GROSSMAN: Mr. Silverman.  
2 MR. COLE: Mr. Silverman.  
3 MS. ADELMAN: -- Silverman.  
4 MR. GROSSMAN: Did we say we're going to let him  
5 ask any questions? How long will your examination take,  
6 Mr. Silverman?  
7 MR. SILVERMAN: Well, they're going to be really  
8 cogent, well-honed questions. So --  
9 MR. GROSSMAN: I know better than that.  
10 MR. SILVERMAN: -- so I think we could be -- I  
11 don't anticipate more than an hour. I really don't.  
12 MS. HARRIS: And then Dr. Cole then. Then they're  
13 putting Dr. Cole on the stand, correct?  
14 MR. GROSSMAN: Right.  
15 MS. ADELMAN: Right.  
16 MS. HARRIS: And how long do you think his  
17 testimony will take?  
18 MS. ROSENFELD: I'll let you know Monday. I can't  
19 guarantee we're going to finish with him on Monday. I don't  
20 know. At this point, I don't know.  
21 MR. GOECKE: That's our concern.  
22 MS. CORDRY: Well, we could certainly go to, I  
23 think, traffic or other kind of, you know, surrebuttal at  
24 that point, I think, on the -- is that the 20th we're  
25 talking about?

Page 269

1 THE WITNESS: 20th.  
2 MS. ADELMAN: No. You've always said that's going  
3 to be a non-environmental day.  
4 MR. GROSSMAN: Right.  
5 MS. ADELMAN: Right.  
6 MS. CORDRY: The traffic or whatever, you know,  
7 however the rebuttal comes in, we can do the other rebuttal  
8 on that day.  
9 MS. ROSENFELD: Do you want to do traffic on  
10 Monday?  
11 MS. CORDRY: No.  
12 MS. ADELMAN: No.  
13 MS. ROSENFELD: No.  
14 MR. GOECKE: Right. So which witnesses besides  
15 Dr. Cole do you plan to call?  
16 MS. ROSENFELD: Ms. Cordry. And Dr. Adelman?  
17 MS. ADELMAN: No.  
18 MS. ROSENFELD: No.  
19 MS. CORDRY: Potentially. There are a couple of  
20 other --  
21 MR. GOECKE: He's not going to testify?  
22 MS. CORDRY: -- there are a couple of neighborhood  
23 people on traffic as well, very short. I'm not sure if  
24 there's much of anything else there, but --  
25 MR. GROSSMAN: Couple of neighborhood people, did

Page 270

1 you say?

2 MS. CORDRY: Yes.

3 MR. GROSSMAN: On rebuttal?

4 MS. CORDRY: Yes.

5 MR. GROSSMAN: All right.

6 MS. CORDRY: And --

7 MR. GOECKE: Do we know who they are?

8 MS. CORDRY: I'm verifying the names. I can let

9 you know. And then potentially somebody, if we get into

10 anything about health, you know, potentially there might be

11 something there, but that would be, that would be it, I

12 think. You know, we don't have a lot of surrebuttal beyond

13 Dr. Cole.

14 MS. HARRIS: Mr. Grossman, how -- I'm a little

15 confused how someone who hasn't sat through the rebuttal

16 then is here to testify in surrebuttal for the traffic.

17 MR. GROSSMAN: I'm a little confused by that, too,

18 unless they tell me that they've read the transcript and

19 they, they're responding to something in the transcript --

20 MS. CORDRY: Well, they can do that. They --

21 MR. GROSSMAN: -- on rebuttal.

22 MS. CORDRY: -- you know, there could be -- you

23 know, there's testimony there that not aware of trucks

24 idling, and if there is, you know, continued testimony about

25 trucks sitting in somebody's backyard right on the edge of

Page 271

1 the ring road, idling for several hours, in the last week or

2 two, I think that goes to the question of are there in -- is

3 there in fact trucks idling far beyond what is being used in

4 the modeling.

5 MR. GROSSMAN: If somebody says they're not aware

6 of something, that doesn't make it subject of a surrebuttal

7 unless you have somebody who can testify that they were

8 aware of it. That's what the -- that would be the response

9 that would be subject to being responded to. That is, you

10 can -- the fact that somebody's not aware of something does

11 not establish a right to rebut that by evidence that has

12 nothing to do with whether that person was aware or not.

13 MS. CORDRY: Well, we can argue about --

14 MR. GROSSMAN: Anyway, you can think about it, but

15 let's limit it to surrebuttal -- not, not the defense case,

16 but to surrebuttal. All right.

17 MR. SILVERMAN: Mr. Grossman, I have a feeling

18 that the discussion of documents may take some time. In a

19 way, I was sort of disappointed Mr. Goecke took back his

20 comprehensive breathtaking motion to exclude everything

21 important, but -- because I think it would be helpful to

22 review some of these documents, for us and for you and for

23 the Board. And I hope you'll -- my anticipation is that

24 there will be a little bit, that we'll take some time with

25 that. And, also, with regard to summations, you know,

Page 272

1 there's --

2 MR. GROSSMAN: Do you want to spoil my, the

3 suspense of my having to go through all the documents later?

4 MR. SILVERMAN: I don't want you to do it by

5 yourself, Mr. Grossman. I'm concerned about you.

6 MR. GROSSMAN: All right. In any event, well, we

7 will, we'll take what time is needed to go through the

8 documents that have been objected to and briefly to discuss

9 conditions.

10 MR. SILVERMAN: And on the summations, you know,

11 there's, there are not that many issues, traffic and health

12 and property values and plans and so on. Maybe there's five

13 or six, I'm not sure at this point --

14 MS. ROSENFELD: Your long-term memory must be

15 better than that.

16 MR. SILVERMAN: Perhaps it is, but each of those

17 has got its own, its own little world, and I'm wondering if

18 it would be helpful -- I have not discussed this with

19 anyone, and maybe it's not a good idea -- but it would be

20 helpful to do summations, to raise the issue and make the

21 arguments on that, on the planning issue, for example, and

22 then move on to the next issue, the next issue, whether that

23 would be --

24 MR. GROSSMAN: You mean split up the summations by

25 topic?

Page 273

1 MR. SILVERMAN: Yes.

2 MR. GROSSMAN: I think Ms. Rosenfeld doesn't agree

3 with you. She doesn't want to do that. She wants to get

4 rolling.

5 MS. CORDRY: Well, I mean, we still, we're going

6 to have the written arguments, right, and then have the

7 summation after all of the written arguments are --

8 MR. GROSSMAN: I think that's what we decided.

9 It's been --

10 MS. CORDRY: Yes.

11 MS. HARRIS: Yes.

12 MR. GROSSMAN: -- a long time since we decided

13 that. Is that --

14 MR. GOECKE: We did. We did.

15 MR. GROSSMAN: Right. So --

16 MR. GOECKE: But before we get there, we have to

17 finish these hearings --

18 MR. GROSSMAN: Yes, let's do that.

19 MR. GOECKE: -- and that's why we raised these

20 issues. So --

21 MR. GROSSMAN: Let's do that --

22 MS. HARRIS: Right, because the final day --

23 MR. GROSSMAN: -- before the EPA changes the

24 standards again.

25 MS. HARRIS: The final day that we have scheduled

Page 274

1 is the 22nd. Are we confident that we are going to be done  
2 on the 22nd? I certainly hope that we will be, but I'm a  
3 little concerned, given eight hours of cross-examination,  
4 that we may not be.  
5 MR. GOECKE: And the mystery witnesses as well.  
6 MS. HARRIS: Yes.  
7 MS. CORDRY: Well, I mean, I think any witnesses  
8 we have I do not think are going to go beyond -- yes, I  
9 don't, I certainly don't see anything we'd have going beyond  
10 the 20th. In fact, I would expect there would be time to  
11 talk about the objections of --  
12 MR. GROSSMAN: And that would --  
13 MS. CORDRY: -- the documents on that day.  
14 MR. GROSSMAN: We have the 22nd. Is that the  
15 other day?  
16 MS. CORDRY: Right.  
17 MS. ADELMAN: Yes.  
18 MR. BRANN: Yes.  
19 MR. GROSSMAN: Yes. So we'd have the 22nd to do  
20 it. All right. Let's -- I don't know about confident, but  
21 we're close enough; so maybe we can go with what we have,  
22 but let's see how it proceeds. We can always, if we have  
23 to, we can add another day on, but --  
24 MR. GOECKE: Can we also get confirmation that any  
25 additional exhibits, we'll receive them by Monday for the

Page 275

1 additional hearing dates?  
2 MR. GROSSMAN: I'm sorry. Say that again.  
3 MR. GOECKE: So we've got a hearing date on the  
4 20th and the 22nd. So 10 days before the 22nd is the 12th,  
5 which is, which is Monday --  
6 MR. GROSSMAN: Right.  
7 MR. GOECKE: -- and so can we -- so can we stop  
8 this last-minute production of documents, or are they ready  
9 to -- are there more exhibits coming with the mystery  
10 witnesses? Do you know yet?  
11 MS. CORDRY: Do we have more laws passed, more  
12 regulations put in place? Let me --  
13 MR. GOECKE: More global warming studies coming  
14 out next week.  
15 MS. CORDRY: Well, they're not a study. They're  
16 -- but in any case, let's put it this way: I certainly  
17 cannot guarantee that there's no salient document that will  
18 not come out in the next week that we might ask to have come  
19 in, but in terms of documents that already exist, yes, I  
20 think we can try to commit to getting everything on the  
21 record by Monday, yes.  
22 MR. GROSSMAN: I mean, I think that all the  
23 parties have tried to do that, and I've tried -- I mean, as  
24 I've said before in this case, there is no discovery  
25 process, theoretically, in these zoning matters, nothing

Page 276

1 specified in the statute or the rules about it, but I do  
2 think that I've tried, because for fairness reasons, to, in  
3 a case as complex as this one, to make sure that everybody  
4 had as much access to the information before a hearing day  
5 as possible so that we'd get an intelligent presentation of  
6 the facts. So --  
7 MS. ROSENFELD: On -- go ahead, Larry.  
8 MR. GROSSMAN: Are you going to argue with me  
9 about being an --  
10 MR. SILVERMAN: No, no. I agree with that.  
11 MR. GROSSMAN: -- intelligent presentation?  
12 MR. SILVERMAN: No. I just, I just wanted to let  
13 people know there's a Federal Register notice of 2/17/2012  
14 entitled Air Quality Designations for the 2010 Primary  
15 Nitrogen Dioxide NO2 Rule, and it's a final rule. And the  
16 citation is federalregister.gov/a/a/2012-23150, and we won't  
17 need all those pages, but I may raise --  
18 MR. GROSSMAN: You're saying that a new set of  
19 standards is coming out?  
20 MR. SILVERMAN: No, no. These are designations of  
21 air quality, NO2 air quality, whether they're in attainment  
22 or non-attainment.  
23 MR. GROSSMAN: I see.  
24 MR. GOECKE: That you may refer to in your  
25 questioning?

Page 277

1 MR. SILVERMAN: Yes.  
2 MS. ADELMAN: Yes.  
3 MR. GOECKE: Would you mind just sending us that  
4 link?  
5 MR. SILVERMAN: No. In fact, I'll give it to you.  
6 MR. GOECKE: That would be great.  
7 MS. ROSENFELD: You need to send it to me too.  
8 MR. SILVERMAN: Oh, okay. I'll do that.  
9 MR. GROSSMAN: All right.  
10 MR. SILVERMAN: This is not the whole thing, but  
11 it's what's important.  
12 MR. GOECKE: Thank you.  
13 MS. ROSENFELD: We got this reference to this  
14 Alaska study and the one from the Fox memo that was  
15 discussed, and then there are the references in  
16 Mr. Sullivan's rebuttal report. I can't tell you right now  
17 if we're planning on using them. Do you want copies of all  
18 of those, as well, if we plan to reference them?  
19 MR. GOECKE: Of the documents cited in  
20 Mr. Sullivan's report?  
21 MS. ROSENFELD: Yes. Do you have those, or do I  
22 need to provide you with --  
23 MR. GOECKE: I think we've got copies of those.  
24 MS. ROSENFELD: -- copies? Okay.  
25 MR. GROSSMAN: All right.

Page 278

1 MR. SILVERMAN: And can we get a copy of the, or a  
2 reference to the Atlanta study and the Alaska study? I've  
3 been looking for them at the break. I can't find them.  
4 MR. GROSSMAN: I think he gave a reference of what  
5 he had on --  
6 MR. SILVERMAN: He gave a reference --  
7 MR. GROSSMAN: -- to a website.  
8 MR. SILVERMAN: -- which referenced them, but it  
9 didn't tell, didn't show the studies. So we're not quite  
10 sure under what circumstances --  
11 MR. GROSSMAN: Yes. If somebody has them, I'd  
12 like you to share them, if you have those references.  
13 THE WITNESS: I may have more. I have -- as  
14 Mr. Silverman said, I don't have the complete report for  
15 Atlanta. I have a summary. And for Alaska I have, I have  
16 read it. I'll check my files and see if it's there.  
17 MR. GROSSMAN: Okay.  
18 MS. ROSENFELD: Yes, and on, just while we're on  
19 this topic, on the Alaska report, we were able to pull it  
20 up. It's a 340-page document --  
21 MS. CORDRY: No, that's the Atlanta report.  
22 MS. ROSENFELD: Oh, the Atlanta report?  
23 MS. CORDRY: Yes.  
24 MR. GROSSMAN: Atlanta.  
25 MS. ROSENFELD: So if you could point us to the

Page 279

1 pages that have the sources that you were referencing, that  
2 would be helpful.  
3 THE WITNESS: In the Alaska document?  
4 MS. CORDRY: No.  
5 MS. ADELMAN: The Atlanta.  
6 MS. ROSENFELD: The Atlanta.  
7 MR. GROSSMAN: No, the Atlanta.  
8 MS. CORDRY: The Atlanta report, which is -- I  
9 think the site you were giving us was for the entire Risk  
10 and Exposure Assessment for the last standard, is that  
11 right?  
12 THE WITNESS: Well, it was for that purpose, but I  
13 was referring to the modeling that was done of the roadway  
14 network for the city, to the metropolitan area. So that's  
15 the portion to look at. I don't, as I say, I don't have the  
16 full document right now. I have an excerpt from it, a  
17 summary. So, you know, I'll pull it up, but I don't have it  
18 with me.  
19 MS. ROSENFELD: Yes, if you could just point us to  
20 where in that document we should be looking, it would help.  
21 THE WITNESS: Well, I just don't have my guidance  
22 to look, but they should describe it in the modeling of the  
23 roadway segments. They're modeling the entire metropolitan  
24 area, and they're using OLM and, I think, maybe PVMRM as  
25 well, but look for that section; yeah, that's the part that

Page 280

1 I'm referring to.  
2 MR. GROSSMAN: All right. Questions? The floor  
3 is yours.  
4 MS. ROSENFELD: Oh, I thought you were asking a  
5 generic question.  
6 MR. GROSSMAN: No.  
7 MS. ROSENFELD: Are you asking me if I'm ready to  
8 resume cross-examination?  
9 MR. GROSSMAN: You may resume.  
10 MS. ROSENFELD: Yes.  
11 BY MS. ROSENFELD:  
12 Q If we could turn back to Exhibit 285, which is  
13 Appendix W. This is EPA's guidance with respect to modeling  
14 for NO2, is that correct?  
15 A It's one of their guidance documents that applies.  
16 Q And when you say it's one of them, can you give me  
17 the full scope of documents that you have looked to or that  
18 you think govern? There's Appendix W and what else?  
19 A Well, of course, Tyler, the Tyler Fox e-mail of  
20 March 1st, 2011 --  
21 MR. GROSSMAN: '11.  
22 THE WITNESS: -- and EPA has other, I'm sure,  
23 applicable guidance that could be reviewed, I mean, land  
24 use, how to just set urban/rural. There's a lot of  
25 different guidance. Well, actually, that's mostly contained

Page 281

1 in the, in Appendix W, but I was primarily referring to  
2 Appendix W and the Tyler Fox memo for this application.  
3 BY MS. ROSENFELD:  
4 Q Okay. All right. Of looking at Appendix W, if,  
5 again, if we go to 28236 --  
6 A I don't have that document, Ms. Rosenfeld. Thank  
7 you.  
8 Q Yes. And I'm referring, again, to the flow chart  
9 at the top of the page that graphically outlines the three  
10 tiers that we've talked about. When I look at Figure 1 in  
11 your rebuttal report on page 11, page 11, Figure 1, the  
12 caption starts off: Stage I, Predicted 98th Percent Hour,  
13 Percentile, One-Hour NO2.  
14 A That's page 11?  
15 Q Yes.  
16 MS. ADELMAN: Mine is the redline.  
17 THE WITNESS: Yeah, page 11 is Figure 1.  
18 BY MS. ROSENFELD:  
19 Q Figure 1. And Figure 1, you call that Stage I,  
20 Predicted 98th Percentile, One-Hour, dot, dot, dot. Is this  
21 analysis the equivalent of a Tier 1 analysis?  
22 A I would say, in the sense that it's 100 percent  
23 NO2, it would be equivalent to Tier 1.  
24 Q Are there other deviations from Tier 1?  
25 A No. I mean, basically, we're handling the

Page 282

1 conversion of NOx, or NO, rather, to NO2, but it assumes 100  
2 percent, which is consistent with Tier 1.  
3 Q And is there a reason why you called it Stage I  
4 instead of Tier 1?  
5 A I wasn't trying to match up to the tiers. I just  
6 had -- I had three different ways we modeled it, and I just  
7 called them stages. It's --  
8 Q Okay.  
9 A -- not related to the tiering system.  
10 Q Okay. So then if I turn to page 12, where it says  
11 Figure 2 and you call that Stage II --  
12 A Correct.  
13 Q -- that doesn't correspond with a Tier 2 analysis;  
14 it's something different?  
15 A It doesn't. That conversion would be a Tier 3  
16 conversion approach.  
17 Q You say this does use the OLM method?  
18 A Yes, it does.  
19 Q And you used five years of background?  
20 A That's correct.  
21 Q Okay.  
22 MR. GROSSMAN: What happened to Tier 2, by the  
23 way?  
24 THE WITNESS: We didn't, we didn't run Tier 2. I  
25 mean, we concluded that, you know, we're going to go, we're

Page 283

1 going to go straight to Tier 3. You don't have to run each  
2 tier to be consistent with EPA methodology.  
3 MR. GROSSMAN: Well, why did you figure that Tier  
4 2 wasn't the appropriate tier?  
5 THE WITNESS: I just felt, because of the fact  
6 that this application is modeling inside the source  
7 itself --  
8 MR. GROSSMAN: Right.  
9 THE WITNESS: -- which is unusual, because of that  
10 constraint, I chose to go straight to, to Tier 3. I mean,  
11 we could have run Tier 2 for completeness, I suppose.  
12 MS. ROSENFELD: That took care of my next three  
13 questions.  
14 MR. GROSSMAN: All right. Shortened it by two  
15 hours.  
16 BY MS. ROSENFELD:  
17 Q Where in Exhibit 285, which is Appendix W, would I  
18 find the methodology that you used for Stage II in your  
19 Figure 2?  
20 A Appendix W refers to model selection and model  
21 options. Appendix W doesn't tell you for each application  
22 of a model how to run it. That's a case-specific issue, and  
23 applying a model in this particular case is a site-specific  
24 matter that would not be exactly contained in Appendix W or  
25 any EPA guidance.

Page 284

1 Q So I wouldn't find it in the Tyler Fox, March 1,  
2 2011, memo either?  
3 A No. That kind of memo is not designed to be  
4 prescriptive of every model application. It's not possible  
5 to do that.  
6 Q So the Stage II analysis that is summarized on  
7 page 12 is really derived from a model that you use, that  
8 you devised specifically for this report, is that correct?  
9 A No.  
10 Q Then what is it derived from?  
11 A The model I'm using for this report is AERMOD,  
12 using the OLM option of AERMOD without any modifications.  
13 This is strictly applying the model for this application.  
14 Q Does Appendix W provide any guidance on what, what  
15 default inputs you should use under the AERMOD modeling?  
16 A Well, for a matter such as this, which is quite  
17 unusual, I will say that, I'll refer back to the fact that  
18 the guidance recommends, on a case-by-case basis, seeking  
19 the most accurate model, and to do that for an unusual  
20 application like this will require that some judgment be  
21 applied in applying the available model and options. So  
22 that's the best explanation I can give.  
23 Q And on page 13, Figure 3, of your rebuttal report,  
24 which is described as Stage III, that doesn't correspond  
25 with Tier 3, does it?

Page 285

1 A Well, I considered -- Tier 3 is more, is more  
2 case-specific analysis. This does not directly apply OLM,  
3 but it's applying, it's applying the methodology of --  
4 that's consistent with OLM based upon the references that I  
5 have provided. It's an adaptation. It's not developing a  
6 new model or a new methodology. It's applying methodology  
7 that exists to an application at hand.  
8 Q Did I hear you say that Stage III does not use  
9 OLM?  
10 A It does, it does not. It's making judgments of  
11 extremely conservative ratios of NO2 to NOx based upon the  
12 review of the literature that's contained in Appendix B.  
13 Q And where in EPA guidance or in any of the sources  
14 that you've referenced did you find other modeling that used  
15 this non-OLM approach?  
16 A EPA guidance, as I just answered, doesn't get that  
17 specific in terms of detailed applications. I applied this  
18 stage, all these stages consistent with the guideline on air  
19 quality models.  
20 Q Well, I'm confused. On the one hand, you say you  
21 apply the guidelines; on the other hand, you say you don't.  
22 So let's go to Stage III. Can you, can you tell me what you  
23 did apply from the guidelines and where you deviated from  
24 the guidelines?  
25 A I'll say again that the guidelines promote



1 consistency but not at the expense of accuracy. I don't  
2 want to read the quote again, but the issue is, I am  
3 following the guidelines in applying existing models and  
4 options to a rather unusual application: inside a source  
5 itself and immediately adjacent to a source itself. So I am  
6 following the guidelines. I don't think I ever said I  
7 wasn't following the guidelines.

8 MR. GROSSMAN: Let me segue off that, and let's  
9 not -- let's try to avoid that question again because he's  
10 answered that many, many times, that same question already.  
11 But you did say, in terms of Stage III, that you didn't  
12 apply the OLM method but you were consistent with the OLM  
13 method. I think that's what you answered. I don't  
14 understand that. What does that mean?

15 THE WITNESS: What it means is OLM -- the OLM  
16 method is converting NO directly emitted from the vehicles  
17 to NO2 --

18 MR. GROSSMAN: Right.

19 THE WITNESS: -- and it's doing it on a  
20 mole-by-mole basis, one mole of ozone; NO creates NO2. To  
21 do that it needs to, as the methodology indicates for OLM,  
22 it needs to have mixing occur.

23 MR. GROSSMAN: Right.

24 THE WITNESS: My point with Stage III, you know,  
25 we're modeling the ring road, we're modeling the loading

1 dock and various things that have most effect on the  
2 modeling, and we have nowhere near enough travel time to  
3 meet the conditions of OLM exactly. So I'm applying ratios,  
4 as described in my report, extremely conservative ratios of  
5 how much conversion could possibly take place in these short  
6 distances, and that's based upon the literature that I  
7 cited.

8 So I'm capping. I'm saying, for the loading dock  
9 and the gas queue, I'm using 25 percent NO2 to NO, and I  
10 described why, and for the other sources, I'm assuming a 50  
11 percent conversion, which, based upon my references, these  
12 scales, which are on the order of tens of meters where the  
13 most important sources are, that they get an extremely  
14 conservative application of that approach.

15 MR. GROSSMAN: But for the Stage II calculations,  
16 Figure 2, you did use the OLM method?

17 THE WITNESS: Correct.

18 MR. GROSSMAN: I'm still having difficulty  
19 understanding how in Stage II it can be the OLM method and  
20 Stage III can be OLM -- consistent with the OLM method but  
21 not applying the OLM method. I don't quite follow that.

22 THE WITNESS: Well, the issue is that for the  
23 sources such as, that are inside, where the queue is and  
24 really adjacent to the loading dock, that's inside source  
25 areas. There's not sufficient, obviously sufficient time to

1 have really any significant conversion.

2 MR. GROSSMAN: Right, but how did you treat them  
3 differently under the OLM method versus the Stage III  
4 method?

5 THE WITNESS: They were treated the same.

6 MR. GROSSMAN: Okay. What was treated  
7 differently?

8 THE WITNESS: The sources such as the ring road,  
9 where the ring road we assumed OLM applied and the peaks are  
10 happening right, practically on the ring road. There is not  
11 sufficient travel time for those really to be real numbers.  
12 It's overstated based on the literature. So we picked an  
13 upper bound, which really would be a very high upper bound,  
14 of 50 percent conversion, and that's basically assuming it's  
15 happening within 10 or 20 meters of where it's released.

16 So the application that we have done is consistent  
17 with the literature. It's exactly the same for the queue  
18 and loading dock but more realistically applies to the,  
19 primarily the ring road, which is the one affecting this the  
20 most, and nearby roadways. It's using a number that's much  
21 more consistent. I mean, OLM can go up to 90 percent  
22 conversion if there's enough ozone. So it's not --

23 MR. GROSSMAN: So you're saying that in Stage III  
24 you were more conservative than the OLM method?

25 THE WITNESS: No. I was less conservative in

1 Stage III, more realistic.

2 MR. GROSSMAN: More realistic than --

3 THE WITNESS: Correct.

4 MR. GROSSMAN: -- than the OLM method?

5 THE WITNESS: That's correct.

6 MR. GROSSMAN: All right.

7 THE WITNESS: Put another way, there are --

8 MR. GROSSMAN: And the only difference was in the  
9 ring road and the other areas around but not on the mall  
10 itself?

11 THE WITNESS: Not for the, not for the, not, it  
12 was for -- the loading dock and queue we treated the same.  
13 Other sources are capped at 50 percent --

14 MR. GROSSMAN: All right.

15 THE WITNESS: -- and if you look at the, look at  
16 the direct emissions from, that I have shown in my reports,  
17 a lot of times the direct emissions from these vehicles is  
18 five to 10 percent NO2. That's the common value you see.  
19 So I go up to 50 percent.

20 MR. GROSSMAN: Okay. Ms. Rosenfeld.

21 BY MS. ROSENFELD:

22 Q And so when you say you treated Stage II and Stage  
23 III the same for purposes of the queue, do I understand that  
24 to mean that you limited the conversion ratio within the  
25 queue area to .25 percent in Stage II and Stage III?

Page 290

1 A That is correct, within the queue area and the  
2 40-meter boundary around that particular area.  
3 Q And then when you talk about the queue area, do I  
4 understand correctly that you are really talking about the  
5 queue plus the -- you had a perimeter beyond the queue.  
6 It's either 50 or 70 meters, I believe.  
7 A It's 40 meters.  
8 Q Forty meters?  
9 A It's one with the plume, one with the area  
10 sources.  
11 Q And you say that the only, if I remember your  
12 testimony correctly, you can only determine that 40-meter  
13 perimeter by looking at your, at your data, is that correct?  
14 A I'm sorry. Can you repeat that question?  
15 Q I believe I asked you, where is that perimeter  
16 shown in your rebuttal report, and I think you told me that  
17 you have to look at the data itself.  
18 A The model files describe that particular zone.  
19 It's 40 meters, which is approximately -- well, it's one  
20 width of the area source around it.  
21 Q Would that 40-meter perimeter vary hour by hour,  
22 or is it a fixed boundary?  
23 A It doesn't vary by the hour.  
24 Q And if you can take a look at this. It's been  
25 marked as Exhibit 230, the overall illustrative plan.

Page 291

1 MR. GROSSMAN: Do we have the movie up there for  
2 any particular reason today or --  
3 MS. ROSENFELD: No.  
4 MS. CORDRY: We didn't. They put it up.  
5 MR. GROSSMAN: Just for the fun of it?  
6 THE WITNESS: Well, in case -- I mean, I do have  
7 references that I could, if needed, I could show.  
8 MR. GROSSMAN: I see.  
9 MS. HARRIS: You didn't see the feature film?  
10 MR. GROSSMAN: I missed the feature film. All I  
11 remember is it used to be .30 when I was a kid.  
12 UNIDENTIFIED SPEAKER: All day.  
13 MS. ROSENFELD: Mr. Grossman, do you have your  
14 pointer with you today?  
15 MR. GROSSMAN: Yes, but Ms. Cordry has it.  
16 MS. CORDRY: That's what -- I'm trying to find it  
17 right now, if we still are hiding it here somewhere.  
18 MR. COLE: Uh-oh.  
19 MS. CORDRY: Uh-oh.  
20 MS. ADELMAN: Are you looking for the pointer?  
21 MR. COLE: This was an issue when I --  
22 MR. GROSSMAN: Yes. No, but she --  
23 MS. ADELMAN: Oh, that's trouble.  
24 MR. GROSSMAN: -- she said she gave it back to me  
25 the last time, and she did.

Page 292

1 THE WITNESS: I have one.  
2 MS. ROSENFELD: That's fine. I --  
3 MR. GROSSMAN: The important thing is to find the  
4 government property one.  
5 MS. ADELMAN: Yes.  
6 MR. SILVERMAN: Right.  
7 MS. CORDRY: I don't think I said I gave it back.  
8 MS. ADELMAN: That has an exception number, I'm  
9 sure.  
10 MR. GROSSMAN: The last time she gave it back to  
11 me. This time you didn't.  
12 MS. CORDRY: The last time I gave it back.  
13 MS. ROSENFELD: We can use a highlighter.  
14 MR. GROSSMAN: That doesn't, that highlighter will  
15 not project a laser beam.  
16 MS. ROSENFELD: I know. That's okay. Unlike the  
17 laser beam, it'll leave a mark on this paper, which I would  
18 actually prefer.  
19 BY MS. ROSENFELD:  
20 Q Looking at Exhibit 230, which is the overall  
21 illustrative plan, dated 7/31/12, could you draw  
22 approximately where that 40-meter boundary would fall?  
23 A I'd prefer to refer to my figures -- Figure 1, 2,  
24 and 3 show the exact area we modeled on the aerial  
25 photograph -- because I'm not going to be able to accurately

Page 293

1 do what you asked me to do.  
2 Q I can tell by looking at this figure where the 40  
3 meters --  
4 A Yes, you can.  
5 Q Okay. I didn't --  
6 A No, I didn't say that. I said you can see where  
7 the queue source is located and you could then scale from  
8 this, you know, 40 meters all around it.  
9 Q No, I don't want to scale anything. I want you to  
10 scale it, please.  
11 A Well, I'm not going to scale it while I'm sitting  
12 here on the stand.  
13 Q Does the 40 meters extend into the forest buffer  
14 area on the mall parcel?  
15 A You'd have to measure. I just, I don't recall.  
16 Q Did you ever look at it --  
17 A I certainly --  
18 Q -- compare it on a map?  
19 A I looked, I know that -- the distances are shown  
20 here, but for me to do the measurements now, I don't know  
21 exactly on the south, exactly where it would stop on here,  
22 but --  
23 Q And the distance is shown where?  
24 A I said it's not shown in the figure. You would  
25 have to draw lines around it, which, you know, I haven't

Page 294

1 done for each direction to see exactly where it ends, if  
2 that's what you're asking.  
3 MR. GROSSMAN: Which figure are you looking at?  
4 THE WITNESS: I'm looking at Figure 2. The queue  
5 is shown as the red rectangle. That's in the southern  
6 portion of the blue area, the special exception area, and  
7 it's shown in that figure -- the 130 is inside that  
8 particular rectangle. That would be the gas queue itself.  
9 BY MS. ROSENFELD:  
10 Q And 40 meters is approximately how many feet?  
11 A On the order of 120 feet, 131 feet.  
12 Q So that 131 feet begins at the edge of the special  
13 exception area?  
14 A At the edge of the queue, which is --  
15 Q At the edge of the queue?  
16 A -- which is a little bit north of that area.  
17 Q And extends 131 feet in this direction?  
18 A All directions.  
19 Q Southerly direction?  
20 A All directions.  
21 Q All directions. Do you know the distance between  
22 the queue area and the nearest residential property?  
23 A I don't recall off the top of my head what that  
24 distance is.  
25 Q And do you know the distance between the edge of

Page 295

1 the queue area to the east and how far it extends? Would it  
2 extend over the loading dock area?  
3 A You know, like I said, I have not marked those  
4 boundaries. It was not necessary to do that. So I'm not  
5 going to -- I can't guess. I mean, it's -- I'm not going to  
6 try to guess at it.  
7 Q If I look at Figure 2, to start with, and you have  
8 isopleths here; the one on the lower left, you say --  
9 MR. GROSSMAN: The one that says 110?  
10 MS. ROSENFELD: I think I see one that says 140.  
11 MR. GROSSMAN: Oh. You said lower left.  
12 MS. ROSENFELD: I was looking at the box on the  
13 lower left.  
14 MR. GROSSMAN: I see.  
15 BY MS. ROSENFELD:  
16 Q Is the peak in there 147.4?  
17 A The peak is 150 -- let's see, 147.4. The peak at  
18 that location is, we're showing -- at that particular  
19 xy-coordinate, we're showing a max of 156. I can't tell you  
20 exactly on here where that absolute peak would be, but it's  
21 most likely in the southern portion of the, of the, in the  
22 blue box.  
23 Q When I look at the blue box on the lower left,  
24 there's an arrow going to the, basically the southeast  
25 corner of the special exception site. Do you see that?

Page 296

1 A Right, I do.  
2 Q And it says, contribution to maximum receptor from  
3 source group, and at the bottom, it says, total, 147.4.  
4 A Well, I can answer that. Basically, the 147.4  
5 pertains to the concentration near the gas queue. The 156  
6 pertains to the maximum concentration near the loading dock  
7 itself.  
8 Q Is the --  
9 MR. GROSSMAN: That's the other box. The box --  
10 MS. ROSENFELD: The other box on the upper right.  
11 MR. GROSSMAN: -- on the right-hand side is the  
12 loading dock.  
13 BY MS. ROSENFELD:  
14 Q And is the gas queue within that 40-meter  
15 boundary?  
16 A Is the gas queue -- well, the gas queue itself was  
17 inside the special exception area.  
18 Q I apologize, my mistake. Is the loading dock?  
19 A The loading dock is inside that boundary.  
20 Q And so can you explain to me how you modeled the  
21 emissions from the loading dock given that it's located  
22 inside that 40-meter --  
23 MR. GROSSMAN: Boundary.  
24 BY MS. ROSENFELD:  
25 Q -- boundary?

Page 297

1 A Loading dock emissions, as well as the queue  
2 emissions, were placed at .25, the ratio of NO<sub>2</sub> to NO<sub>x</sub>, and  
3 within that zone, within the source area and the 40-meter  
4 zone, that was treated on that basis. Outside that zone it  
5 was treated with OLM directly.  
6 Q And can you explain in Figure 3 how you handled  
7 the loading dock emissions?  
8 A Loading dock and gas queue were addressed on the  
9 same, on the same basis for the receptors inside that zone.  
10 Q So it was also reduced by .25?  
11 A No. The ratio of NO<sub>2</sub> to NO<sub>x</sub> was treated as .25.  
12 Q The conversion was a .25?  
13 A The ratio.  
14 Q It just was a straight, out of, out of the  
15 tailpipe .25?  
16 A As I, as I could -- as my references show, out of  
17 the tailpipe, it's approximately 20 percent cars idling for  
18 a long period of time. We used 25 percent to represent all  
19 the locations inside that particular zone in terms of the  
20 sources of the queue and the loading dock.  
21 Q And so you treated the emissions from the vehicles  
22 in the queue the same as you did the emissions from the  
23 trucks in the loading dock?  
24 A That's correct.  
25 Q And do you have any references in your rebuttal

Page 298

1 report that would support the .25 application to the trucks?  
2 A The .25 I believe came up in the, came up in the  
3 last of my testimony. How many times have I gave the  
4 reference? It's standard -- it came from California. I  
5 referenced documents. I don't have that document, I don't  
6 believe, with me, but it's a pretty standard default. As I  
7 show in these references, it's quite high for running  
8 vehicles. It's conservatively overstating a little bit the  
9 idling vehicles. Idling vehicles emit a lot more NO2 in  
10 relationship to NOx than moving vehicles.  
11 Q And is that California report cited in your  
12 rebuttal report?  
13 A I don't believe that it is.  
14 Q Could you give me the name and source?  
15 A I can provide that. I don't have it with me  
16 today. I can say, though, the reference Lenner and  
17 Lindquist, which is on my data disk, that that particular  
18 reference provides direct measurement of the how the ratios  
19 change the function of time for idling vehicles, and it  
20 shows you, you know, five, 10, 15, 20 minutes, how that  
21 ratio is modified. That certainly does support the use of  
22 25 percent as a conservative application for this  
23 application here, where cars are only in queue 20 minutes  
24 max.  
25 Q And you did reference that Lenner and Lindquist in

Page 299

1 your report, correct?  
2 A I did.  
3 Q Okay. I'd like to go back to Appendix W again for  
4 a moment, which I think you have.  
5 A I do.  
6 MR. GROSSMAN: Appendix W is getting to be my  
7 favorite appendix, other than my own.  
8 MS. ROSENFELD: You're going to get to know it  
9 very well.  
10 THE WITNESS: It's great reading.  
11 MS. ROSENFELD: Just getting warmed up.  
12 BY MS. ROSENFELD:  
13 Q If you could turn to Section 9.1.3, which is --  
14 A What page?  
15 Q -- on page 68246, and the heading of that section,  
16 it's under a section titled Use of Uncertainty and  
17 Decision-Making. And under there, the sentence reads: The  
18 accuracy of the model estimates varies with the model used,  
19 the type of application, and site-specific characteristics.  
20 Would you agree that, with that sentence, generally?  
21 A Yes. That's basically what I said.  
22 Q And it further states: Thus, it is desirable to  
23 quantify the accuracy or uncertainty associated with  
24 concentration estimates used in decision-making. Correct?  
25 A Well, it says what it says. That's what it says.

Page 300

1 Q Okay. Where in your rebuttal report have you  
2 quantified the accuracy or uncertainty associated with the  
3 concentration estimates that you have produced?  
4 A Well, the basic rule of thumb on using AERMOD,  
5 you'll see references between 50 percent to a factor of two  
6 listed as uncertainty ranges. As I've mentioned before, for  
7 applied modeling EPA does not require, and I've not seen it  
8 done, where you do any kind of uncertainty analysis for that  
9 application at hand. The standard is treated as bright  
10 lines. If the standard is 190, you know, 190.4 is a pass;  
11 190.6 would be a fail. There's no uncertainty bounds added  
12 into that analysis.  
13 Q Well, I understand that the standard that you're  
14 trying to achieve is a bright line, but this is talking  
15 about model estimates and the accuracy of model estimates  
16 varies with the model used, the type of application, and  
17 site-specific characteristics. Did you anywhere in your  
18 rebuttal report do any analysis showing this 50 percent to a  
19 factor of two uncertainty analysis?  
20 A Well, I certainly considered how my modeling would  
21 match up compared to the event. Let's say monitoring were  
22 done, which I'm not advocating, as I mentioned before, but  
23 uncertainty -- my modeling, Stage III, for example, shows  
24 121. I think the actual expected range, in my judgment,  
25 would be under 100, probably be somewhere between 75 and 100

Page 301

1 micrograms per cubic meter as the 98th percentile. So, in  
2 that context, yes, I have considered it. The likelihood of  
3 that modeling be, being underestimated, in my judgment, is  
4 extremely low.  
5 Q But the EPA says in this section, 9.1.3, that it's  
6 desirable to quantify the accuracy or uncertainty. Have you  
7 quantified it in your rebuttal report?  
8 A Well, I just quantified it in my testimony. My  
9 report does not show uncertainty.  
10 Q Okay. Does the 50 percent to a factor of two that  
11 you just referenced, does that apply to the ozone limiting  
12 method?  
13 A That's a general statement. I don't -- EPA will  
14 not typically have error bounds, typical error bounds for  
15 each way you can apply the model. Is there a general rule  
16 of thumb? My experience in doing model performance work,  
17 usually on a long-term basis or a distributional basis, plus  
18 or minus 50 percent is typical with well-defined emissions,  
19 which in this case we do have.  
20 MR. GROSSMAN: I just want to understand that a  
21 little bit better. You're saying that it's accepted that  
22 the accuracy factor for AERMOD is plus or minus 50 percent?  
23 THE WITNESS: It is, because the situation, the  
24 situation is, if you have a program that's workable, like,  
25 from EPA's point of view or MDE's point of view, you really

Page 302

1 need to have a bright line. You really couldn't administer  
2 the program otherwise. And in the context of this  
3 application, we know from available measured NO2 data, for  
4 example, which we're talking about here, we know what kind  
5 of levels they're seeing in areas that would be especially  
6 much more affected than here.

7 So by looking at that information, as I testified  
8 last time, you can conclude that, you know, if we're getting  
9 an 86 in Richmond or we're getting a 92 in LA down in Las  
10 Vegas next to a highway, then 153 in an extreme case, quite  
11 confident that this modeling of even 121 I'm showing for NO2  
12 is overstated. And so you have to -- I think you have to  
13 use judgment. You consider interpreted available measured  
14 data, consider the kind of conservative assumptions that  
15 you've made and make a judgment, which I have.

16 MR. GROSSMAN: Well, but just addressing my  
17 specific question here, if you came out with an estimate,  
18 using AERMOD, of 100, AERMOD, it's accepted, you're saying,  
19 in the scientific community, could be plus or minus 50  
20 percent, meaning the actual predictable value could be 150  
21 or 50?

22 THE WITNESS: I'd say, no, Mr. Grossman, because  
23 basically we're modeling everything but background, right?  
24 So we're adding background in at the end.

25 MR. GROSSMAN: Yes.

Page 303

1 THE WITNESS: So if we're looking at Stage III,  
2 for example, the modeling is 121. Most of that is  
3 background. So approximately 76 micrograms is background.  
4 So we're modeling approximately -- we're modeling a total of  
5 approximately 45 micrograms; so 50 percent of that would be  
6 22, 23 micrograms. So if you were to scale this up  
7 appropriately, it would be going up to, you know, 121 in  
8 the --

9 MR. GROSSMAN: Okay. So you're saying you don't  
10 apply that 50 percent factor to the background, which is a  
11 monitored measurement --

12 THE WITNESS: Right.

13 MR. GROSSMAN: -- but you do apply it to your  
14 predicted modeling results minus the background?

15 THE WITNESS: That'd be how I would make that  
16 comparison, yes --

17 MR. GROSSMAN: Okay.

18 THE WITNESS: -- because background is not  
19 something that you can model. You're not modeling  
20 background. You're using a background that's additive to  
21 what you've modeled. The uncertainty would just be in the  
22 modeling part of it in terms of what EPA is saying, plus or  
23 minus 50 percent, as typical. But just to be clear, they  
24 don't say, well, we're going to go 50 percent above your  
25 number and that'll be your, how we regulate you --

Page 304

1 MR. GROSSMAN: No, I understand that, but I'm  
2 applying, of course, something different. I agree with you,  
3 they have bright lines --

4 THE WITNESS: Right.

5 MR. GROSSMAN: -- I just have bright witnesses and  
6 bright lawyers and bright opposition and --

7 BY MS. ROSENFELD:

8 Q And --

9 MS. ROSENFELD: I'm sorry. I didn't mean to cut  
10 you off.

11 MR. GROSSMAN: No, you didn't interrupt me. I'm  
12 finished.

13 BY MS. ROSENFELD:

14 Q In follow-up, can you show me where in the EPA  
15 guidance it limits this factor to the background?

16 A Well, we're only modeling what we're modeling.  
17 If --

18 Q I'm asking you where in the --

19 A I'm going to give you my --

20 Q -- guidance.

21 A -- my answer to that. I don't know if the  
22 appendix W --

23 MS. ROSENFELD: Apologize.

24 MR. BRANN: Very soothing.

25 MS. ROSENFELD: Somebody wants my attention.

Page 305

1 THE WITNESS: But Appendix W makes statements of  
2 model accuracy. I don't think they get into this level of  
3 detail, but I'm talking about the model, and it's the  
4 modeling's uncertainty. We're not, quote/unquote, modeling  
5 background. That's a given. So we're talking about the  
6 uncertainty in the transport and dispersion terms in the  
7 model itself, and the example I gave, it's, you know, 45  
8 micrograms was being modeled, then added to background. It  
9 wouldn't be fair to take the whole number and say 50 percent  
10 above and beyond that.

11 MR. GROSSMAN: I understand. I understand that  
12 distinction.

13 BY MS. ROSENFELD:

14 Q With respect to the background, though, you are  
15 modeling the background. You've selected the hour-by-hour  
16 comparative basis. So that is a modeling --

17 A We're not modeling. We're using available  
18 measured data. So, in that context, no, that's not, that's  
19 not part of the model treatment. It's added to the model as  
20 part of an input to the model, but it's not related to  
21 dispersion and transport that's being modeled and as EPA's  
22 talking about in Appendix W.

23 Q In Section 9.1.3b of the same Appendix W, page  
24 68247, it says: In all applications of models, an effort is  
25 encouraged to identify the reliability of the model

Page 306

1 estimates for that particular area and to determine the  
2 magnitude and sources of error associated with the use of  
3 the model. Do you see that language?  
4 A I do.  
5 Q When it talks about that particular area, does  
6 that mean the geographical area that you're modeling?  
7 A Probably are referring to that, to the area, the  
8 geographic area you're modeling. I assume that's what they  
9 mean.  
10 Q Did you provide in your rebuttal report, did you  
11 identify the reliability of the model estimates for the  
12 particular geographic area that you modeled?  
13 A Well, the statement I just made, in terms of the  
14 range, would be applicable in my judgment to the area I  
15 modeled, to the modeling of the Wheaton gas station,  
16 Costco --  
17 Q So that would be the --  
18 A -- Wheaton gas station.  
19 Q -- 50 percent to a factor of two to the emissions  
20 that you modeled?  
21 A Correct. I said, on a long-term basis, 50 percent  
22 is what I said.  
23 Q I thought I understood you to say that the AERMOD,  
24 the plus or minus is a factor of 50 percent to a factor of  
25 two.

Page 307

1 A In distributional -- on a distributional basis,  
2 I'd expect that as well.  
3 Q And what do you mean by --  
4 A On a day-by-day -- if I had to model University  
5 and whatever intersection it's connecting to on June 6th,  
6 you know, 2009, 1 o'clock in the afternoon, I'm not going to  
7 hit that number accurately, but if I have to come up with a  
8 distribution over the course of a year, the models work  
9 quite well in that context.  
10 So when you ask me what do I expect is going to  
11 happen, I expect 50 percent is probably a reasonable  
12 estimate, plus or minus, but I'm not saying so much up. I'm  
13 saying, in my judgment, this modeling is extremely  
14 conservative. We're using a factor, you know, at Stage III,  
15 of 50 percent conversion. It's probably more like 10 or  
16 five percent conversion in the roadway. So I believe it's  
17 quite overstated, and I made that statement relative to the  
18 available measured data as well.  
19 MR. GROSSMAN: Let's turn that, that one off.  
20 MS. ROSENFELD: I am. I apologize. It's my  
21 daughter. I will shut her down.  
22 MR. GROSSMAN: Well, I didn't say to do that.  
23 MS. ROSENFELD: All caps: CAN YOU GET ME? No. I  
24 apologize.  
25 MR. GROSSMAN: Well, if it's any help, we're

Page 308

1 approaching 5 o'clock here. So maybe you can get her.  
2 MS. ROSENFELD: Okay. Well, actually, I've got  
3 about four or five more questions in this, on this one  
4 topic --  
5 MR. GROSSMAN: Okay.  
6 MS. ROSENFELD: -- and then that would be a good  
7 time to --  
8 MR. GROSSMAN: All right.  
9 MS. ROSENFELD: -- to wrap up.  
10 BY MS. ROSENFELD:  
11 Q One more section I wanted to go over. Section  
12 9.3.1b of Appendix W says: The analyst is responsible for  
13 recognizing and quantifying limitations in the accuracy,  
14 precision, and sensitivity of the procedure. Do you see  
15 that?  
16 A I do.  
17 Q Is the analyst in this section an EPA analyst, or  
18 is it the person conducting the modeling?  
19 A My interpretation, it's the person conducting the  
20 modeling.  
21 Q Okay. And is the procedure the modeling exercise  
22 itself?  
23 A I assume it's referring to the modeling procedure  
24 that's been employed.  
25 Q Can you show me where in the rebuttal report you

Page 309

1 recognized and quantified the limitations and the  
2 sensitivity of your analysis?  
3 A I think I've answered these questions before. I  
4 mean, I'll say it again that the modeling that we've done is  
5 typical, like for, as for a permit. You do not put error  
6 bounds and descriptions like this into the report itself. I  
7 just made a statement that I'll stand behind, using NO2 as  
8 an example of how I could interpret that uncertainty, but  
9 this statement doesn't imply that if you looked at a permit  
10 for any industrial facility in Maryland, you're going to go  
11 and find an uncertainty analysis in that permit. It's not,  
12 it's not done. It's not a standard procedure, and I'm  
13 following what were standard procedures as if I was doing  
14 modeling for regulatory agency --  
15 Q Okay.  
16 A -- with the exception, we don't have the luxury --  
17 Q I'm not trying to be repetitive. I'm going  
18 through the guidelines to see how you think they should be  
19 applied. The third sentence in that same section, 9.1.3b,  
20 reads: Information that might be useful to the  
21 decision-maker in recognizing the seriousness of potential  
22 air quality violations includes such model accuracy  
23 estimates as accuracy of peak predictions, bias, noise,  
24 correlation, frequency distribution, spatial extent of high  
25 concentration, et cetera. And this says that this is

1 information that might be useful to the decision-maker,  
2 which in this case would be, of course, ultimately the Board  
3 of Appeals. Where in the rebuttal report do you discuss the  
4 accuracy of your modeling estimates with respect to peak  
5 predictions?

6 A We can go through these one at a time, but you  
7 know, no applied model can do all these things you're asking  
8 for. You have to refer back to the validation of AERMOD.  
9 Just to cut to the chase, for example, how can we show  
10 comparison to measured values? We don't have, we don't  
11 have, you know, years' worth of data to make comparisons.  
12 We're running an applied model the way they're applied for  
13 permits all across the country. You can't do all these  
14 steps.

15 Q I'm confused. I thought you said that you were  
16 working with actual data from the monitors so that you're  
17 not using hypotheticals, you are using real data. Am I --

18 A Well, I am, but the question, the analyst is  
19 responsible for recognizing and quantifying limitations in  
20 the accuracy, I've talked about that, precision and  
21 sensitivity of the procedure. Information that might be  
22 useful to the decision-maker in recognizing -- well, it goes  
23 on and on -- model accuracy, includes model accuracy  
24 estimates, which I just stated, and accuracy of peak  
25 conditions, which I stated; bias, noise, correlation, you

1 have to have measured data to do that. You'd have to have a  
2 lot of measured data to do that. We can't do that. Bias,  
3 noise, correlation, frequency distribution, we have -- the  
4 model does create frequency distribution to determine the  
5 compliance, but no, we have determined spatial extent of  
6 high concentrations, but you cannot do all these steps in an  
7 applied model.

8 MS. ROSENFELD: Okay. I have no further questions  
9 at this moment. I will be back on Monday.

10 MR. GROSSMAN: You'll think of more?

11 THE WITNESS: She said she had no further  
12 questions.

13 MR. GROSSMAN: I heard it too.

14 MR. COLE: She qualified it.

15 MR. GROSSMAN: All right. So we will return here  
16 at 9:30 on Monday morning the 12th for the conclusion of  
17 Mr. Sullivan's cross-examination on his rebuttal. Thank you  
18 all. We're adjourned. I'll see you on Monday. Have a good  
19 weekend.

20 (Whereupon, at 5:01 p.m., the hearing was  
21 adjourned.)  
22  
23  
24  
25

C E R T I F I C A T E

DEPOSITION SERVICES, INC., hereby certifies that  
the attached pages represent an accurate transcript of the  
electronic sound recording of the proceedings before the  
Office of Zoning and Administrative Hearings for Montgomery  
County in the matter of:

Petition of Costco Wholesale Corporation  
Special Exception No. S-2863  
OZAH No. 13-12

By:

Wendy Campos, Transcriber

<b>A</b>	265:21;286:1;299:18, 23:300:2,15;301:6,22; 305:2;308:13;309:22, 23;310:4,20,23,23,24	135:8;300:11;305:8,19 <b>adding (3)</b> 44:17;99:15;302:24 <b>addition (4)</b> 59:19;60:5;248:14; 249:4 <b>additional (10)</b> 44:7;49:14;64:22,23; 71:2;202:21;224:1,10; 274:25;275:1 <b>additions (1)</b> 22:9 <b>additive (1)</b> 303:20 <b>address (5)</b> 15:10;77:7,22;185:9; 217:8 <b>addressed (5)</b> 15:7;30:22;227:10, 21;297:8 <b>addressing (2)</b> 233:18;302:16 <b>ADELMAN (44)</b> 5:7,7;18:14;52:23, 24;53:4,4;54:11,11; 63:3;75:15;90:4,7,9,12, 15,17;91:8;93:23; 150:13,17;172:8; 202:8;246:13;247:11; 251:9;254:11,14; 267:24;268:3,15; 269:2,5,12,16,17; 274:17;277:2;279:5; 281:16;291:20,23; 292:5,8 <b>Adelman's (3)</b> 52:13,18,21 <b>adequate (1)</b> 233:24 <b>adjacent (2)</b> 286:5;287:24 <b>adjourned (2)</b> 311:18,21 <b>administer (1)</b> 302:1 <b>admissible (3)</b> 12:23;13:6;195:4 <b>Adverse (11)</b> 6:9;11:7,12,13,16; 12:8,15;76:12;77:1; 256:6;264:25 <b>advocating (1)</b> 300:22 <b>aerial (1)</b> 292:24 <b>AERMOD (36)</b> 208:20;210:2; 211:15;217:23;218:1, 7,15,20;219:4,4,11,23; 220:2,9,11,25;222:13, 14,20;223:4;225:13; 228:8;231:2,3,3,10; 242:14;284:11,12,15;	300:4;301:22;302:18, 18;306:23;310:8 <b>affect (12)</b> 52:20;53:11,25; 54:20;55:6;71:14,16; 75:3;87:16;127:3; 200:22;264:18 <b>affected (1)</b> 302:6 <b>affecting (2)</b> 74:5;288:19 <b>affirmatively (2)</b> 124:5;125:6 <b>affirmed (1)</b> 259:13 <b>afford (2)</b> 138:15;139:12 <b>afield (1)</b> 254:1 <b>afternoon (4)</b> 24:10;203:8,16; 307:6 <b>afterwards (1)</b> 47:24 <b>again (99)</b> 7:16;8:6;10:11; 13:18;14:9;15:3;27:24; 35:18,24;39:16;42:3,5, 16;49:22;50:11,22; 52:8;53:1;55:10,19; 56:5;62:11,23;63:6,10; 65:3;67:19;68:6,18; 69:2,8,18;72:23;75:1; 80:17;84:21;98:3; 106:3,24;114:14,20; 115:4;116:4;117:1,1,2, 14,18,25;118:11; 125:23;127:23;130:7, 9;131:4;132:4,8; 133:18,23;134:1,6; 139:5;141:5;142:23; 147:20;150:14,20; 152:6;159:14;166:21; 172:20;180:8,20; 181:17;182:25;183:4; 187:20;189:9;198:8; 199:21;200:16;209:14; 218:16;225:15;231:25; 232:21;234:20;262:22, 23;263:14;273:24; 275:2;281:5,8;285:25; 286:2,9;299:3;309:4 <b>against (2)</b> 150:22;257:25 <b>agencies (5)</b> 11:3;98:21;99:22; 102:5;261:1 <b>agency (4)</b> 227:2;235:7;255:17; 309:14 <b>ago (5)</b> 15:14,21;49:10; 144:13;241:14	<b>agree (36)</b> 13:2;22:7;69:15; 98:6,11,25;99:1; 104:15;112:15;124:14; 125:2,11,12;126:14; 128:16;132:4,20; 142:16;153:5;175:16; 187:17,19,20;201:10; 210:11;220:25;229:2; 230:5,6;235:18;254:4, 7;273:2;276:10; 299:20;304:2 <b>agreed (6)</b> 56:14;124:6;125:7; 177:18,22;187:24 <b>agreeing (2)</b> 56:23;187:17 <b>agreement (3)</b> 173:23;178:5;179:2 <b>agrees (3)</b> 26:7;181:18;195:9 <b>Ah (2)</b> 97:10;204:25 <b>ahead (15)</b> 42:8;59:4;89:18,19; 90:19;100:9,24; 110:13;122:3;146:12; 158:2;162:1;199:18; 262:13;276:7 <b>air (42)</b> 76:13;78:12;90:25; 91:11;100:19;101:12; 105:17;119:19;151:14; 160:9;165:3;179:23; 193:21,22,22;201:18; 207:25;209:3;211:22; 215:9,23;216:13; 224:2;237:18,22; 249:14;250:7;255:20; 256:13,14;257:24; 258:17;260:25;261:7; 263:7;265:1;266:4; 276:14,21,21;285:18; 309:22 <b>airborne (1)</b> 99:17 <b>Airport (2)</b> 234:12,15 <b>aisle (9)</b> 73:8,21;79:17;81:6, 6,7,24,24,25 <b>aisles (3)</b> 81:12;82:4;86:5 <b>Alaska (12)</b> 242:7;243:19;244:8; 249:4;251:25;252:1, 13;277:14;278:2,15, 19;279:3 <b>Alexandria (3)</b> 132:1;143:6;239:15 <b>allow (7)</b> 4:6;99:3;100:15,18; 206:8,10,17
----------	---	--	---	--



<p><b>allowable (2)</b> 134:18;211:9</p> <p><b>allowed (2)</b> 77:18;141:15</p> <p><b>allows (3)</b> 117:6;139:13;208:13</p> <p><b>almost (3)</b> 84:18;131:14;187:13</p> <p><b>along (16)</b> 9:3;15:23;16:23; 24:14;30:19;46:16; 47:20;51:22;61:5; 65:15;138:4;156:12; 159:20;182:2;212:1; 261:19</p> <p><b>alternative (26)</b> 117:7;144:6;184:14, 15;208:10;212:3,4; 213:19;218:3,6,12; 219:14;220:14,16; 222:4;224:23,25; 226:3,7;228:11; 230:19;231:6,9,9; 235:13,17</p> <p><b>Although (3)</b> 10:2;147:8;152:12</p> <p><b>always (12)</b> 28:19;81:13,15,21; 82:23;116:21;164:24; 166:15;187:13;260:11; 269:2;274:22</p> <p><b>Ambient (16)</b> 105:17;193:21; 209:3;224:2;237:18, 22;242:15;249:14; 250:7;255:19;256:13, 14;257:24;258:16; 265:1;266:4</p> <p><b>among (2)</b> 131:5;245:16</p> <p><b>amount (11)</b> 8:13;31:14,15,16; 76:16;82:5,18;88:8; 130:16;180:16;196:7</p> <p><b>Anacostia (1)</b> 133:3</p> <p><b>Analogous (1)</b> 253:10</p> <p><b>analogy (1)</b> 253:2</p> <p><b>analyses (3)</b> 18:21;62:25;103:11</p> <p><b>analysis (103)</b> 11:24;21:9;23:1,5; 25:15;34:13;46:21; 50:5,11;51:6;52:22; 53:13,13,17,18;55:6, 14,23;59:2,5;62:2; 64:17;67:4,6;71:15,17; 72:10;73:3;74:8,10,19; 75:3;76:7,10,17;77:4,6, 10,23;82:7,12,98:19, 23;99:23;100:17;</p>	<p>101:21;102:7;108:20; 109:21;110:3,14; 111:25;112:4;113:9; 115:16;134:21,22; 135:1,2,6,9,17;138:12; 139:13;143:2;144:12; 161:16;176:13;204:4, 10;205:17,22,24;206:3, 9,11,17,19;207:3; 210:13;211:21,24; 219:18;223:5;226:1,3; 229:9;233:19,24; 247:24;253:8;260:17; 281:21,21;282:13; 284:6;285:2;300:8,12, 18,19;309:2,11</p> <p><b>analyst (5)</b> 259:19;308:12,17, 17;310:18</p> <p><b>analyze (3)</b> 22:13,15;53:12</p> <p><b>analyzed (2)</b> 123:17;189:13</p> <p><b>analyzing (2)</b> 48:16;228:2</p> <p><b>andc (1)</b> 15:22</p> <p><b>Angeles (3)</b> 158:5,5,23</p> <p><b>angle (1)</b> 181:2</p> <p><b>annual (20)</b> 21:12,15,18,21; 85:24;106:11,11; 175:11;176:7;189:3; 195:25;196:12;197:6; 198:17;201:2;255:14, 19;257:11,18;258:20</p> <p><b>answered (43)</b> 23:11;39:8;42:22; 43:6,21;49:17;63:14, 20,23;68:25;70:13; 71:1;75:21;76:1;99:9; 100:11;113:19;114:10; 119:1;123:3,6,9; 129:12,22;132:6,9; 133:4,23;134:10,11,16; 137:13;138:1;157:24; 159:24;167:7;171:4,6; 258:23;285:16;286:10, 13;309:3</p> <p><b>anticipate (2)</b> 77:19;268:11</p> <p><b>anticipated (1)</b> 77:25</p> <p><b>anticipation (1)</b> 271:23</p> <p><b>anymore (8)</b> 114:10;121:5; 124:15;136:13,15; 137:12,22;201:14</p> <p><b>apologize (4)</b> 296:18;304:23;</p>	<p>307:20,24</p> <p><b>apparently (3)</b> 13:18;48:6;175:17</p> <p><b>Appeals (12)</b> 4:4,15,18;12:2,13; 17:4;216:23;235:11; 256:5;266:1,7;310:3</p> <p><b>appear (8)</b> 15:2;19:3,14;56:15; 169:23;214:17,18,20</p> <p><b>appears (7)</b> 26:23;151:17; 156:21;185:3,12; 188:2;242:25</p> <p><b>Appendix (54)</b> 206:13;209:2,6; 210:9;211:15;212:5, 17;213:1,11;214:10, 11;215:6;217:9; 218:10,12;219:14; 221:10,14,20;222:5,7, 9;224:1,21;225:22; 226:10,10,10;228:12; 229:2;231:7;233:21; 236:25;260:5;261:14; 280:13,18;281:1,2,4; 283:17,20,21,24; 284:14;285:12;299:3, 6,7;304:22;305:1,22, 23;308:12</p> <p><b>appendixes (1)</b> 45:5</p> <p><b>apples (2)</b> 226:16,17</p> <p><b>Applicability (2)</b> 209:2;233:15</p> <p><b>applicable (12)</b> 52:3;105:24;108:5; 135:23;211:21;215:7; 225:17;233:11,14; 236:5;280:23;306:14</p> <p><b>applicant (5)</b> 256:11;257:24; 258:3,11;263:4</p> <p><b>Applicant's (1)</b> 88:22</p> <p><b>application (71)</b> 10:18;23:6,10;98:9; 210:16;211:5,15; 217:8;218:5,18;219:3, 4;220:11,20;222:24; 224:1;225:12,18; 226:5,6;228:9;230:24; 232:24;234:23;236:14; 237:11,13,24,25; 241:25;242:1,5;243:6, 20;244:15;249:13,17; 250:5,12,13;251:24; 253:22;254:20;255:16; 256:2,9;257:12,16; 259:1,21;260:15; 264:6;265:18;266:14; 281:2;283:6,21;284:4,</p>	<p>13,20;285:7;286:4; 287:14;288:16;298:1, 22,23;299:19;300:9, 16;302:3</p> <p><b>applications (6)</b> 99:4;117:8;241:7; 250:8;285:17;305:24</p> <p><b>applied (20)</b> 51:8;216:9;225:8; 241:22;242:6,20; 243:18,22;244:1,2; 258:8;284:21;285:17; 288:9;300:7;309:19; 310:7,12,12;311:7</p> <p><b>applies (7)</b> 54:4;76:19,23; 217:11;255:25;280:15; 288:18</p> <p><b>apply (21)</b> 25:24;216:16;217:3, 6;225:15;227:13,18; 238:13;245:3,22; 253:19;258:10;260:18; 285:2,21,23;286:12; 301:11,15;303:10,13</p> <p><b>applying (18)</b> 20:15;32:24;218:21; 222:13;226:15;237:23; 243:24;265:18;283:23; 284:13,21;285:3,3,6; 286:3;287:3,21;304:2</p> <p><b>appreciate (3)</b> 13:2;216:1;231:23</p> <p><b>approach (25)</b> 28:11;60:11;77:17; 110:2,25;113:16; 116:9;124:15;135:12; 138:23;140:9;177:24; 184:1,9,9;207:12; 211:23;230:13;232:5, 15,20;263:24;282:16; 285:15;287:14</p> <p><b>approached (1)</b> 264:20</p> <p><b>approaches (3)</b> 184:14,16;207:6</p> <p><b>approaching (2)</b> 265:6;308:1</p> <p><b>appropriate (24)</b> 10:17;12:10;103:21; 113:12;115:15;119:17; 128:3;134:6;135:17; 139:16;140:13;153:2; 177:25;178:3;182:16; 192:20;194:15;216:16; 220:25;227:16;234:17; 247:16;265:8;283:4</p> <p><b>appropriately (5)</b> 15:7;184:23;242:21; 265:6;303:7</p> <p><b>approval (7)</b> 205:22;207:13; 211:18;219:6;221:5;</p>	<p>228:6;251:23</p> <p><b>approve (5)</b> 205:21;206:3,7; 241:25;256:5</p> <p><b>approved (4)</b> 206:20;211:24; 227:16;229:19</p> <p><b>approximately (12)</b> 65:12;83:19;155:23; 156:6;241:5;290:19; 292:22;294:10;297:17; 303:3,4,5</p> <p><b>approximation (1)</b> 240:19</p> <p><b>April (5)</b> 4:12;6:11;52:25; 64:16;69:22</p> <p><b>arbitrariness (1)</b> 265:13</p> <p><b>arbitrary (4)</b> 259:2;262:1;263:8; 264:6</p> <p><b>area (82)</b> 10:25;12:17;18:1; 22:16;28:25;35:8;49:4; 56:16;68:19,19;86:8, 10,11;101:12;122:23; 123:20;128:17,20,23, 24,25;129:2;130:10,21, 24;131:25;133:14,25; 135:9;136:4;137:22, 22,24;144:25;145:7; 147:8,10;149:1,22; 150:4;158:11,13,13; 159:19;237:9,12; 238:10,11,15,25; 239:25;247:6,6; 251:14;256:8;260:11; 279:14,24;289:25; 290:1,2,3,9,20;292:24; 293:14;294:6,6,13,16, 22;295:1,2;296:17; 297:3;306:1,5,6,7,8,12, 14</p> <p><b>areas (20)</b> 11:1;86:17;98:15; 103:13;104:15;107:2, 17,18;114:15;118:19; 119:4,13,14;120:1; 123:2,8;258:9;287:25; 289:9;302:5</p> <p><b>area-wide (1)</b> 201:17</p> <p><b>argue (4)</b> 12:12;64:7;271:13; 276:8</p> <p><b>argued (2)</b> 135:7;259:8</p> <p><b>argument (1)</b> 64:9</p> <p><b>arguments (3)</b> 272:21;273:6,7</p> <p><b>arithmetically (1)</b></p>
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<p>132:16  <b>Arlington (17)</b>                  112:8,9;113:2,6;                  119:5;122:15;124:4,6,                  11;125:7,14;126:3,5;                  128:2,5,16;131:24  <b>around (20)</b>                  35:18;45:20;56:16,                  16,19;58:15,18;67:8,                  11;68:12;69:25;111:7,                  8;141:1;146:13;289:9;                  290:2,20;293:8,25  <b>arrive (1)</b>                  196:4  <b>arrow (1)</b>                  295:24  <b>art (1)</b>                  223:24  <b>articles (3)</b>                  7:5,6;13:9  <b>artificial (1)</b>                  77:3  <b>Asaph (1)</b>                  132:1  <b>aside (4)</b>                  31:3,5;200:21;                  251:22  <b>aspects (1)</b>                  168:6  <b>assess (2)</b>                  110:6;258:1  <b>assessing (1)</b>                  261:2  <b>assessment (5)</b>                  109:25;234:3;247:7;                  261:8;279:10  <b>assessments (1)</b>                  22:18  <b>associated (4)</b>                  51:2;299:23;300:2;                  306:2  <b>associations (1)</b>                  260:14  <b>assume (22)</b>                  7:14;9:24;16:5;                  33:19;47:11;57:12;                  78:10;82:13;99:1;                  143:22;159:22;186:4;                  192:7;199:25;200:1;                  204:16;205:24;225:23;                  253:3;257:19;306:8;                  308:23  <b>assumed (7)</b>                  81:25;84:15;85:22,                  24;198:15;205:20;                  288:9  <b>assumes (2)</b>                  204:7;282:1  <b>assuming (32)</b>                  24:13;26:15,17;                  28:11;54:20;58:2;60:6;                  61:10;68:23;73:1;76:5;                  78:6,17;82:18,21;83:6;</p>	<p>84:9,10,24;85:11,19;                  116:11;137:6;143:16,                  24;166:24;167:6;                  193:6;215:25;252:23;                  287:10;288:14  <b>assumption (4)</b>                  80:21;84:16;85:1,4  <b>assumptions (14)</b>                  18:20;19:5,18;67:9,                  10;74:9;80:10;85:20;                  136:18;146:5;253:20,                  21;261:13;302:14  <b>assurance (2)</b>                  179:7;180:12  <b>assured (1)</b>                  179:18  <b>asterisk (2)</b>                  27:11,18  <b>Atlanta (19)</b>                  242:5;243:20;                  244:14;246:5,22;                  247:6;250:19;251:14,                  20,22;278:2,15,21,22,                  24;279:5,6,7,8  <b>atmosphere (1)</b>                  58:17  <b>attachment (1)</b>                  208:16  <b>attainment (1)</b>                  276:21  <b>attempt (2)</b>                  9:13;232:19  <b>attention (1)</b>                  304:25  <b>attorney (1)</b>                  174:20  <b>attribute (1)</b>                  181:25  <b>atypical (1)</b>                  217:7  <b>August (4)</b>                  137:1;139:2,10;                  204:15  <b>authenticate (2)</b>                  143:23;151:25  <b>authoritative (1)</b>                  234:13  <b>authority (4)</b>                  215:9,9;249:6,8  <b>automobile (2)</b>                  4:7;158:23  <b>available (18)</b>                  98:15;117:3;156:13,                  17,22;208:19;209:25;                  233:2,24;245:6;248:6;                  251:21;267:5;284:21;                  302:3,13;305:17;                  307:18  <b>Avenue (4)</b>                  30:22;36:13;37:2;                  136:8  <b>Avenue/University (1)</b>                  137:10</p>	<p><b>average (53)</b>                  21:15,21;27:11,21,                  25;52:14;55:20;62:15;                  79:20;84:15;85:24;                  113:5;124:13,16;                  135:7;140:11;156:23;                  163:22;168:8;175:11;                  176:10,13,21;182:19;                  184:5;186:25;187:2;                  189:3;190:6,19;193:2;                  195:20,21,22,23;                  196:12;197:8,12,18;                  198:8,9,9,10,17;                  199:17;200:8,12,21;                  201:2,13;239:5,8;                  255:14  <b>averaged (16)</b>                  27:10,12;47:4;175:3;                  181:4;182:15,15,18;                  187:3;195:16,19;                  196:1;198:6,17;199:8;                  200:4  <b>averages (12)</b>                  21:12;91:17,22;92:5,                  6,19;178:3,10;182:20;                  199:4,8;257:11  <b>averaging (13)</b>                  62:16;85:14;104:11;                  105:24;176:8;186:23;                  190:16;198:8;199:4,4;                  201:15;258:20,20  <b>avoid (1)</b>                  286:9  <b>aware (17)</b>                  32:21;70:7;72:18,22;                  83:20,25;85:25;86:3,4,                  8,15;87:12;270:23;                  271:5,8,10,12  <b>away (8)</b>                  10:12;58:25;121:7,7;                  134:20;136:2,5,6</p>	<p>70:16;71:7  <b>background (69)</b>                  22:9;40:13;41:12;                  44:6,17,18;64:22;                  89:16;96:1,2;98:22;                  99:15,22;100:19;                  101:15,20;102:6;                  103:10;108:4,10,11,15,                  17,19,24;109:8,20;                  110:2,4,4,24;111:4,7,                  25;112:4,19;113:2;                  114:21;115:24;117:7;                  120:22;121:17;125:22;                  126:25;140:9,21;                  144:11;161:5;170:10,                  15;184:11,14;196:14;                  197:7;282:19;302:23,                  24;303:3,3,10,14,18,                  20,20;304:15;305:5,8,                  14,15  <b>backgrounds (5)</b>                  109:1,12,19;110:16;                  203:25  <b>backing (4)</b>                  72:8;73:6,8;75:19  <b>backs (4)</b>                  73:4;74:13,21;77:21  <b>backup (4)</b>                  71:11;72:19;74:24;                  91:18  <b>backups (2)</b>                  75:2;78:22  <b>backwards (1)</b>                  120:19  <b>backyard (1)</b>                  270:25  <b>bad (1)</b>                  125:14  <b>ball (1)</b>                  241:20  <b>ballpark (1)</b>                  180:18  <b>BAM (26)</b>                  174:25;175:4,5,7,12,                  21,23;180:2,18;181:3;                  182:14,23;183:20;                  184:6,25;185:12,15;                  187:8,11;191:13;                  192:8,15;193:3,3;                  194:9;200:22  <b>barely (1)</b>                  239:16  <b>base (1)</b>                  261:5  <b>Based (35)</b>                  7:4;8:20;21:8;29:11;                  31:8;34:12;35:8;52:14;                  54:6;59:5;61:10;64:15,                  17;74:2;83:8;103:11;                  111:25;155:20,22;                  156:21;177:15;185:24;                  190:24;225:6;231:22;                  234:3,4;236:12,13;</p>	<p>262:3;285:4,11;287:6,                  11;288:12  <b>bases (3)</b>                  233:23;260:16;261:7  <b>basic (2)</b>                  83:15;300:4  <b>basically (13)</b>                  73:12;95:7;107:10;                  132:5;165:2;243:11;                  253:15;281:25;288:14;                  295:24;296:4;299:21;                  302:23  <b>basis (55)</b>                  22:17;24:10;25:13;                  38:12,24;42:4,11;                  46:17;47:3;49:2,7;                  51:14,16;61:22;71:1;                  99:6;101:13;104:4;                  121:7;125:22;153:2;                  163:22;164:18;166:16;                  170:1,8,9,25,25;                  176:14;190:3;197:6;                  206:20;208:12,14;                  211:18;219:7;221:6;                  226:1;229:11,18;                  233:12,14;261:1,6;                  263:8;284:18;286:20;                  297:4,9;301:17,17;                  305:16;306:21;307:1  <b>bay (4)</b>                  87:3,9,10,18  <b>bays (4)</b>                  82:23;85:13,22;                  87:12  <b>beam (2)</b>                  292:15,17  <b>bear (1)</b>                  229:21  <b>bears (1)</b>                  230:1  <b>beaten (1)</b>                  197:25  <b>beating (1)</b>                  130:7  <b>became (1)</b>                  241:19  <b>bed (1)</b>                  157:2  <b>beginning (2)</b>                  16:10;246:15  <b>begins (3)</b>                  242:12;251:10;                  294:12  <b>begun (1)</b>                  4:12  <b>behalf (1)</b>                  4:15  <b>behind (2)</b>                  79:25;309:7  <b>belongs (1)</b>                  11:24  <b>below (8)</b>                  116:23;127:1;</p>
---	---	---	---	---

<p>136:23;166:20;214:13;                  263:4,6;265:1  <b>Beltsville (24)</b>                  122:15,19;124:3,12;                  125:17;130:13;131:2,                  5;160:16,19;161:8,8;                  169:10,17;173:21;                  174:1;177:9,14;                  180:20;183:8;188:3,                  21,23;189:1  <b>benchmark (3)</b>                  263:9;264:7,14  <b>benchmarks (1)</b>                  264:16  <b>benefits (1)</b>                  260:18  <b>besides (3)</b>                  170:6;173:16;269:14  <b>best (10)</b>                  22:8;24:12;76:9,9;                  78:1;141:1;215:15;                  217:5,7;284:22  <b>beta-attenuation (1)</b>                  174:25  <b>Bethlehem (1)</b>                  225:10  <b>better (5)</b>                  152:6;228:1;268:9;                  272:15;301:21  <b>beyond (24)</b>                  9:7,20;20:7;24:20;                  30:21;73:8;76:5;84:9,                  21;107:5;120:18,19;                  122:2;129:13;135:14;                  138:12;141:18;264:18;                  270:12;271:3;274:8,9;                  290:5;305:10  <b>bias (4)</b>                  193:4;309:23;                  310:25;311:2  <b>biased (2)</b>                  162:4;234:18  <b>big (7)</b>                  45:17;72:4;79:24;                  95:3;190:7;199:3;                  226:13  <b>bigger (3)</b>                  44:2;45:11;188:9  <b>biggest (1)</b>                  243:23  <b>billion (1)</b>                  154:5  <b>binding (1)</b>                  264:17  <b>bit (14)</b>                  21:24,25;23:22;                  102:14;104:8;160:14;                  189:10,11;202:24;                  239:19;271:24;294:16;                  298:8;301:21  <b>blindly (1)</b>                  244:1  <b>BLK (4)</b></p>	<p>164:20;168:8;173:9,                  11  <b>block (2)</b>                  175:3;183:2  <b>Block-Averaged (4)</b>                  162:11,21,22,24  <b>blue (3)</b>                  294:6;295:22,23  <b>Board (15)</b>                  4:3,15,18;12:2,13;                  17:4;18:9;32:25;                  216:22;235:11;256:4;                  266:1,7;271:23;310:2  <b>bodies (1)</b>                  234:13  <b>borrow (2)</b>                  29:25;95:2  <b>both (11)</b>                  21:15;68:16;104:16;                  111:17;137:1;208:18;                  209:24;210:9;238:9;                  244:13;247:21  <b>bother (1)</b>                  11:25  <b>bottom (21)</b>                  26:20,22;27:18;                  41:22;68:2;74:5;78:12;                  105:15;116:4;153:14;                  160:19;168:6;244:14,                  18;247:2,10;248:8;                  250:20;251:4,8;296:3  <b>bottom-line (1)</b>                  59:11  <b>Boulevard (5)</b>                  25:1;29:17;70:20;                  71:8;137:10  <b>bound (2)</b>                  288:13,13  <b>boundaries (1)</b>                  295:4  <b>boundary (7)</b>                  290:2,22;292:22;                  296:15,19,23,25  <b>bounds (4)</b>                  300:11;301:14,14;                  309:6  <b>box (6)</b>                  295:12,22,23;296:9,                  9,10  <b>boy (1)</b>                  92:24  <b>BRANN (6)</b>                  4:20,20,21;262:20;                  274:18;304:24  <b>break (11)</b>                  7:11;25:12;63:7;                  71:19;87:23;88:11;                  93:6;203:2;266:20,22;                  278:3  <b>breathing (1)</b>                  20:3  <b>breathtaking (1)</b>                  271:20</p>	<p><b>brief (2)</b>                  88:16;266:25  <b>briefly (2)</b>                  19:17;272:8  <b>bright (7)</b>                  300:9,14;302:1;                  304:3,5,6,6  <b>bring (3)</b>                  9:21;135:10;175:9  <b>bringing (1)</b>                  9:24  <b>broad (1)</b>                  12:16  <b>broader (6)</b>                  57:1;136:15;138:7;                  139:20,25;140:10  <b>broken (1)</b>                  168:7  <b>brought (2)</b>                  139:17;193:13  <b>Bryant (1)</b>                  154:12  <b>buffer (1)</b>                  293:13  <b>build (1)</b>                  255:18  <b>building (3)</b>                  239:16;243:20;255:8  <b>built (3)</b>                  116:18;234:23;                  252:23  <b>business (13)</b>                  119:18,21;120:3;                  121:18;122:7;123:19;                  132:21;133:9,19;                  134:8,14;239:22;263:7</p>	<p>43:3,7;62:4;65:2;                  109:3;145:13;157:3;                  161:3;193:15;221:15;                  253:18;298:2,2,4;                  302:17  <b>campus (1)</b>                  160:20  <b>can (178)</b>                  7:10,10;11:6;12:4;                  15:9;16:9,10;19:5,7,16,                  20;20:10,14;25:12;                  26:1,2;29:25;33:25;                  34:21;35:3;37:10,20;                  38:10,10,12;39:22;                  40:14;45:17;50:8;                  51:13;54:12;57:12;                  63:3;64:7;66:7;72:15,                  16;74:2,7,17;76:25;                  77:4,10;81:7,13,19;                  87:20,22;90:20;91:4;                  93:5;95:2;96:13,23;                  100:5;107:18;109:20,                  20;110:3,6,10,11;                  112:6,20;113:7;                  116:21;119:20;120:11;                  122:18;123:12,21;                  125:5;132:14;137:18;                  138:11,13;142:20;                  150:21,21;152:15;                  156:5;159:3,16;164:3;                  169:1,16;173:21;                  174:11;175:4;181:25;                  182:7,7;186:10;                  189:24;190:12,13,14,                  18,19;192:22;193:18,                  24;196:1;197:5;198:2,                  7;200:21;201:21;                  211:1,2,10;213:6,8;                  222:22;227:6,13,18;                  229:14;230:2;233:10,                  13,17;243:9;244:12;                  245:25;246:16;248:24;                  257:6,14;258:3;                  262:23;263:23;264:3;                  265:20;269:7;270:8,                  20;271:7,10,13,14;                  274:21,22,23,24;275:7,                  7,20;278:1;280:16;                  284:22;285:22,22;                  287:19,20;288:21;                  290:12,14,24;292:13;                  293:2,4,6;296:4,20;                  297:6;298:15,16;                  301:15;302:8;303:19;                  304:14;307:23;308:1,                  25;310:6,7,9  <b>capped (1)</b>                  289:13  <b>capping (1)</b>                  287:8  <b>caps (1)</b>                  307:23  <b>caption (1)</b></p>	<p>281:12  <b>car (4)</b>                  79:9,10,21;252:11  <b>care (1)</b>                  283:12  <b>careful (1)</b>                  18:14  <b>Carlo (5)</b>                  74:8,10,15,18,18  <b>cars (40)</b>                  20:16,19,20;21:2,4,                  18,20;38:4,5;46:16,19;                  47:22,25;49:14;50:15;                  53:3;54:5,19;56:5;                  63:2;67:7,10;70:8,16;                  71:6,12;72:19;73:6,8;                  75:19;76:11,24,24;                  77:3,20;78:17,21;                  243:20;297:17;298:23  <b>case (49)</b>                  4:19;11:21;14:6;                  31:20;67:2;106:25;                  125:5;130:13;170:3;                  172:14;185:15;194:7;                  197:17;203:21,24;                  205:23;206:6,7,25;                  207:1,6,19;210:11;                  216:9,22;230:2,3;                  231:23;234:9;235:10;                  237:19;241:8;251:19;                  252:20;256:1;257:1;                  258:24;264:20;265:6;                  266:15;271:15;275:16,                  24;276:3;283:23;                  291:6;301:19;302:10;                  310:2  <b>case-by-case (10)</b>                  99:6;206:20;208:14;                  211:18;219:7;221:6;                  226:1;229:10;260:16;                  284:18  <b>cases (4)</b>                  21:15;72:2;170:2;                  241:16  <b>case-specific (2)</b>                  283:22;285:2  <b>catch (1)</b>                  244:18  <b>category (1)</b>                  72:15  <b>cause (1)</b>                  9:1  <b>caveat (4)</b>                  107:2;217:1;258:19;                  259:17  <b>CBSA (1)</b>                  128:25  <b>center (3)</b>                  123:21;130:24;239:1  <b>central (13)</b>                  119:18,20;120:3;                  121:18;122:7;123:19,                  22;132:21;133:9,19;</p>
		<b>C</b>		
		<p><b>C-2 (1)</b>                  4:11  <b>calculate (1)</b>                  65:22  <b>calculations (5)</b>                  54:1,21;57:17;65:19;                  287:15  <b>calculator (1)</b>                  45:17  <b>California (2)</b>                  298:4,11  <b>call (13)</b>                  28:24;44:20;88:21;                  95:15;130:14;175:12;                  192:21;224:5;234:2;                  267:4;269:15;281:19;                  282:11  <b>called (7)</b>                  26:25;128:25;208:8;                  239:20;252:7;282:3,7  <b>calls (1)</b>                  176:4  <b>came (18)</b>                  25:21;35:4;39:2;</p>		

<p>134:8,14;144:23  <b>certain (5)</b>                  82:18;164:14;168:5;                  240:1;258:9  <b>Certainly (37)</b>                  7:17;14:14;30:1;                  33:25;65:19;74:10;                  99:2;108:21;115:24;                  117:9;119:16;128:16;                  131:10;143:5;156:20;                  158:22;159:9;184:9;                  189:3,15;193:2;197:2;                  211:9;214:21;217:5;                  229:25;233:4,15;                  264:19,24;268:22;                  274:2,9;275:16;                  293:17;298:21;300:20  <b>certified (2)</b>                  175:25;184:23  <b>cetera (1)</b>                  309:25  <b>challenge (1)</b>                  229:22  <b>challenged (1)</b>                  231:3  <b>chance (5)</b>                  8:23;13:21;93:4;                  189:14;190:17  <b>change (31)</b>                  6:9;9:25;10:3,6,8,14,                  18;11:19;12:16;19:17;                  20:4,9;21:16;78:3,5;                  84:11;105:9;120:10,                  24;139:2,5,14,14,15;                  140:15;148:20;182:7,                  8;250:11,11;298:19  <b>changed (14)</b>                  20:17;49:9;136:7;                  140:20,20,22;150:23;                  177:24;178:4;180:13,                  22;197:4;214:19;216:1  <b>changes (9)</b>                  15:22;22:21;31:11;                  78:10;139:16;141:1,4;                  170:4;273:23  <b>changing (5)</b>                  120:21,22;135:21;                  178:6;181:19  <b>characteristics (2)</b>                  299:19;300:17  <b>characterized (2)</b>                  252:15,16  <b>characterizes (1)</b>                  208:17  <b>chart (31)</b>                  24:8;35:17;36:6;                  40:20;44:5;66:13;                  69:22;89:1;131:4;                  132:5;142:20;143:11,                  16,16,17,24;154:6;                  155:17,20;161:7,11;                  165:24;168:2,8,17;                  177:11;183:1,6;188:9;</p>	<p>225:22;281:8  <b>charts (5)</b>                  89:20;151:19,20,24;                  186:24  <b>chase (2)</b>                  59:8;310:9  <b>check (6)</b>                  88:12;97:14;146:10;                  169:16;171:21;278:16  <b>checked (3)</b>                  143:19;150:21;179:6  <b>choice (2)</b>                  125:14;128:3  <b>choices (1)</b>                  138:21  <b>chooses (1)</b>                  111:13  <b>chose (1)</b>                  283:10  <b>chosen (2)</b>                  256:25;257:24  <b>circle (2)</b>                  26:23;27:6  <b>circumstances (2)</b>                  227:17;278:10  <b>citation (3)</b>                  248:23;260:7;276:16  <b>citations (1)</b>                  248:24  <b>cited (5)</b>                  112:8;248:15;                  277:19;287:7;298:11  <b>citing (1)</b>                  114:23  <b>city (2)</b>                  119:23;279:14  <b>clarification (4)</b>                  145:2;199:18;224:1,                  5  <b>clarified (4)</b>                  99:24;106:17;                  172:24;209:6  <b>clarify (21)</b>                  20:14;38:10;63:10,                  19;100:1;106:9;114:7,                  9;135:11;145:24;                  161:10;164:23;169:3;                  170:2;184:13;188:1;                  207:15;225:2;230:15;                  243:16;256:19  <b>clarifying (1)</b>                  110:22  <b>clarity (1)</b>                  250:18  <b>clause (1)</b>                  221:7  <b>clean (5)</b>                  84:14,18;85:8;                  207:25;211:22  <b>clean-diesel (2)</b>                  84:16;85:4  <b>cleaner (1)</b>                  165:3</p>	<p><b>clear (16)</b>                  25:14;50:7;54:3;                  62:25;86:24;165:9,9;                  183:11;186:15;215:6;                  216:19;228:7;257:11,                  21;260:12;303:23  <b>clear-cut (1)</b>                  11:2  <b>clearly (18)</b>                  11:14;26:2;32:6;                  42:4;47:14;66:25;                  109:8;110:10;119:10;                  174:4;191:21;204:13;                  208:12;214:1;239:25;                  243:8;246:25;249:25  <b>climate (9)</b>                  6:8;9:25;10:3,6,8,14,                  18;11:19;12:16  <b>close (5)</b>                  23:24;62:9;135:10;                  158:4;274:21  <b>closely (1)</b>                  124:14  <b>closer (4)</b>                  131:24;180:14;                  252:7,11  <b>closest (3)</b>                  126:23;135:16;                  196:23  <b>CO (13)</b>                  93:11;94:14,21;                  107:8,9;116:12;130:9;                  131:3,7,8;132:18;                  148:10,14  <b>Coalition (3)</b>                  5:6,8;17:2  <b>COB (1)</b>                  4:14  <b>cobbled (1)</b>                  15:5  <b>coefficients (1)</b>                  135:24  <b>cogent (1)</b>                  268:8  <b>cogitating (1)</b>                  241:6  <b>coincide (1)</b>                  76:22  <b>coincided (1)</b>                  108:18  <b>COLE (42)</b>                  5:3,3,4;6:3;8:19;                  14:8,18;30:8;109:4,7,                  10;122:19;124:3,5,8,                  13;125:6,13,21;135:7;                  140:22;141:6,10;                  160:15;177:21;178:6;                  184:24;185:16;186:9;                  192:6;204:3;205:9;                  232:8;267:13;268:2,                  12,13;269:15;270:13;                  291:18,21;311:14  <b>Cole's (3)</b></p>	<p>141:21;142:7;176:12  <b>collected (1)</b>                  193:23  <b>collecting (1)</b>                  166:14  <b>collective (2)</b>                  101:13;131:1  <b>Columbia (13)</b>                  119:5,15,22;120:4,6,                  6;122:21;123:25;                  124:10;125:15;131:25;                  133:13;134:11  <b>Columbia's (1)</b>                  119:18  <b>column (7)</b>                  38:17;40:22;41:2;                  89:1;154:18;166:3;                  229:7  <b>Colvin (1)</b>                  129:10  <b>combination (1)</b>                  128:24  <b>combine (1)</b>                  192:17  <b>combined (1)</b>                  199:14  <b>comfortable (1)</b>                  113:13  <b>coming (21)</b>                  34:21;46:9,12,20;                  51:22;64:13;71:20;                  72:7;73:5;87:17;104:8;                  114:7;163:21;196:16;                  238:22,24,24;239:24;                  275:9,13;276:19  <b>comma (1)</b>                  247:8  <b>comment (3)</b>                  8:3,25;14:25  <b>commit (1)</b>                  275:20  <b>commitments (3)</b>                  8:15;9:19,20  <b>committee (1)</b>                  225:3  <b>common (6)</b>                  206:18;255:25;                  257:15;258:9;261:1;                  289:18  <b>communication (2)</b>                  34:11;125:9  <b>community (2)</b>                  232:12;302:19  <b>company (2)</b>                  21:10;225:10  <b>comparable (3)</b>                  210:22;214:17;252:6  <b>comparative (2)</b>                  122:9;305:16  <b>compare (4)</b>                  40:17;62:24;264:8;                  293:18  <b>compared (10)</b></p>	<p>49:14;53:13;127:7;                  175:13;196:23;215:5;                  246:21,21,24;300:21  <b>comparing (4)</b>                  156:21;187:15;                  225:11;226:17  <b>comparison (6)</b>                  5:24;129:11;177:5;                  215:20;303:16;310:10  <b>comparisons (2)</b>                  247:14;310:11  <b>compensate (1)</b>                  59:16  <b>compensates (1)</b>                  60:12  <b>compensating (1)</b>                  76:15  <b>compilation (2)</b>                  150:22;151:24  <b>complained (1)</b>                  183:16  <b>complete (3)</b>                  55:13;237:21;278:14  <b>completely (4)</b>                  78:6;183:12;236:7,9  <b>completeness (1)</b>                  283:11  <b>complex (1)</b>                  276:3  <b>compliance (5)</b>                  201:12;216:4;                  219:11;231:4;311:5  <b>comply (3)</b>                  9:6;254:5,13  <b>complying (1)</b>                  255:6  <b>components (1)</b>                  35:10  <b>composite (1)</b>                  170:17  <b>comprehensive (1)</b>                  271:20  <b>compromise (1)</b>                  176:11  <b>computed (1)</b>                  99:19  <b>computer (2)</b>                  202:16,17  <b>concede (1)</b>                  182:18  <b>conceded (1)</b>                  185:3  <b>concentrate (2)</b>                  127:10,18  <b>concentrated (2)</b>                  127:13;131:25  <b>concentration (33)</b>                  60:22,23;78:10,12;                  95:19;98:14;99:15;                  102:16,17,21;103:3,12,                  15,24;104:9,14;106:3;                  108:6,22;114:15;                  115:22;122:22;123:1;</p>
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128:4,17;129:25; 197:2;261:2;296:5,6; 299:24;300:3;309:25 <b>concentrations (25)</b> 54:25;72:5;76:13; 78:9;98:12;99:17,17; 103:11;105:23;108:11; 115:12;119:25;122:13; 129:24;137:18;158:6, 7,10;160:10;197:6; 201:18;242:16;247:5; 260:11;311:6 <b>concept (1)</b> 16:14 <b>conceptually (3)</b> 152:10,16,18 <b>concern (1)</b> 268:21 <b>concerned (6)</b> 100:10;182:4;185:9, 20;272:5;274:3 <b>concerns (1)</b> 17:3 <b>conclude (1)</b> 302:8 <b>concluded (2)</b> 210:21;282:25 <b>conclusion (5)</b> 110:8;173:7,8;179:1; 311:16 <b>concur (1)</b> 220:6 <b>concurrent (4)</b> 108:19,25;109:12; 111:4 <b>conditions (13)</b> 17:3,9;55:13;58:16, 20;59:15;77:1;230:21, 25;244:3;272:9;287:3; 310:25 <b>conduct (1)</b> 74:18 <b>conducted (2)</b> 4:15;219:18 <b>conducting (2)</b> 308:18,19 <b>confident (3)</b> 274:1,20;302:11 <b>confined (1)</b> 239:24 <b>confirm (13)</b> 23:20;105:13; 112:17;113:7;145:11, 12,18;152:11,19; 153:14;175:20;188:1; 195:11 <b>confirmation (1)</b> 274:24 <b>confirms (1)</b> 192:6 <b>conform (2)</b> 265:13,20 <b>conformity (1)</b>	261:17 <b>confused (9)</b> 23:23;44:24;100:11; 120:8;256:23;270:15, 17;285:20;310:15 <b>congestion (1)</b> 70:4 <b>Congress (1)</b> 260:14 <b>connecting (1)</b> 307:5 <b>consensus (1)</b> 139:10 <b>consent (1)</b> 18:10 <b>conservatism (14)</b> 32:16,24;60:11; 76:17;77:7,19,23; 78:23;84:22;108:10; 109:25;114:16;139:12; 181:19 <b>conservative (55)</b> 28:10;32:12;33:12; 78:1;79:11;80:1,17; 81:1;82:12;84:12; 85:21;98:22;99:3,15, 22;100:16,19;101:15, 20;102:6,8,12,13; 108:3,15;109:15; 110:24;112:5;113:10; 114:22;115:6;116:5,9, 19,21;117:5,9,10; 136:18;138:23;139:10; 177:5,17,25;181:20; 236:12;248:11;285:11; 287:4,14;288:24,25; 298:22;302:14;307:14 <b>conservatively (1)</b> 298:8 <b>consider (11)</b> 12:24;76:10;123:19; 136:3;142:4;229:14; 238:16;257:13;264:16; 302:13,14 <b>considerably (1)</b> 185:1 <b>consideration (2)</b> 76:7;233:5 <b>considered (25)</b> 12:1,10;48:12;77:13; 120:4;181:4;207:21, 24;208:10,13;211:16; 212:2;219:5,13;221:4; 222:1,1,13;228:9,10; 229:13;231:5;285:1; 300:20;301:2 <b>considering (4)</b> 9:12;11:1;12:15,16 <b>considers (2)</b> 133:25;134:8 <b>consistency (6)</b> 260:15,17,19,25; 261:4;286:1	<b>consistent (11)</b> 226:25;253:20; 261:6;282:2;283:2; 285:4,18;286:12; 287:20;288:16,21 <b>constraint (1)</b> 283:10 <b>constraints (2)</b> 227:1;233:9 <b>construct (1)</b> 4:6 <b>construe (1)</b> 233:17 <b>consultation (1)</b> 232:25 <b>contact (1)</b> 34:18 <b>contained (5)</b> 233:19;250:9; 280:25;283:24;285:12 <b>contention (4)</b> 182:13;183:20,24, 25;200:19 <b>context (28)</b> 10:18;11:22;52:21; 55:10;71:10,17,22; 72:24;73:25;74:18; 76:11;102:24;119:7,8; 157:20;158:14;177:23; 204:14;206:4,5; 211:11;216:6;237:23; 253:16;301:2;302:2; 305:18;307:9 <b>continually (1)</b> 142:1 <b>continue (5)</b> 12:12;18:10;134:21; 184:1;223:11 <b>continued (4)</b> 135:6;138:24; 247:13;270:24 <b>continues (1)</b> 114:25 <b>continuing (2)</b> 219:10;231:1 <b>continuous (1)</b> 170:25 <b>contrast (1)</b> 129:23 <b>contribute (2)</b> 10:8;101:11 <b>contribution (7)</b> 71:23;74:1;111:7; 131:1;196:12,17;296:2 <b>contributions (1)</b> 72:17 <b>contributor (1)</b> 72:4 <b>control (6)</b> 34:4;179:21;261:1,2; 263:15,21 <b>controls (1)</b> 263:6	<b>convenient (1)</b> 266:20 <b>conversations (1)</b> 34:14 <b>conversion (27)</b> 115:19;125:24; 126:6;127:2;136:24; 137:3;139:6,18; 140:15,21,23;155:1; 205:18;225:23,24; 282:1,15,16;287:5,11; 288:1,14,22;289:24; 297:12;307:15,16 <b>converted (2)</b> 204:8;205:25 <b>converting (1)</b> 286:16 <b>copied (2)</b> 15:24;95:6 <b>copies (9)</b> 35:21;88:17;93:6; 96:11;97:9;213:7; 277:17,23,24 <b>copy (18)</b> 43:25;89:22,25; 90:10;93:4;97:10; 205:2,5;209:10;212:8, 16;213:5,6,10,25; 214:8;224:10;278:1 <b>CORDRY (526)</b> 5:1,1,2;6:6,13;7:14, 18,20,23;8:1;9:15,16; 10:5,19,23;11:1;12:6, 12;14:13,17,23;15:1, 13,17,20;16:12,17; 17:24;18:1,5,9,16,18; 19:6,10,13,15;23:12, 14,15;24:23;26:6,12, 14;29:25;30:3,10,13; 31:18;32:11,18;33:3,6, 9,11,15;35:21,24,25; 36:7;37:10;38:7,21; 39:7,11,15,21,25;40:2, 9,16,21,24;41:1,3,7; 42:18,20,24;43:1,5,8, 10,13,16,19,23;44:11, 14,16,21,23;45:1,4,7,9, 14,16,19;48:3,4,7,13, 19,22;49:11,18,25; 51:5,7,9,10;54:7,9,18; 58:10,11;59:23;60:1,4, 15,24;62:11,21,22; 63:8,9,16,17,24;64:2,8, 10,12;66:1,3,6,8;69:14; 70:19;71:4;75:5,7,13, 16,18,25;76:3,10,18; 81:17,18;82:9,10; 87:10,11,20,22;88:3,8, 12;89:11,14,18;90:19, 24;91:4,7,10,15,25; 92:3,9,13,16;93:2,5,9, 11,15,19,25;94:2,9,12, 16,18,20,25;95:11,14, 17,22;96:18,25;97:2,7, 8,10,14,17,19,23;98:1, 2;100:5,8,13;101:2,24; 102:2,3,10;103:4,8,9; 105:1,4,8,10;106:20, 22,23;111:1;113:20, 24;114:1,3,5,6,11,12, 24;115:3;117:13,17,18, 19,24;118:1,5,8,9,12, 15,16,22;119:2; 120:21;121:1,3,5,11, 16,21;122:1,4;123:6, 10,11;126:16,18,20,21; 127:22;128:1,11,14; 129:17,20;130:2,4,8; 131:8,13;132:10,17; 133:5,8,17,21;134:2,3, 7,13,19,25;135:3,5; 138:3,6,9,14,18,19; 139:7,23;140:7; 141:11,17,20,22,25; 142:5,9,12,13;143:13, 18,21;144:1,10; 145:20;146:8,12,18; 147:2,6,14,17,22; 148:1,3,8,11,18,20,24; 149:10,15,18,21,23; 150:1,3,7,12,19;151:4, 8,21,23;152:1,4,14; 153:7,12,17,19,22; 154:11,13,16,18,20,22, 23;157:25;158:9; 159:12,15,18,21;160:1, 4,25;161:2,23,25; 163:8,11;164:4,9,12; 166:1,2;167:8,11,14, 20,25;168:13,21,24; 169:6,8,11,16;170:12, 14,16,20;171:7,13,14; 172:2,7,9,12,18,21,23; 173:1,21;174:8,13,15, 19,22,23;176:20;179:5, 17;180:3,7,10,11,24; 181:1,6,9,13,15,22,24; 182:3,9,12,17,25; 183:18,22,25;184:8,20; 185:6,19,21,23;186:12, 16,21,22;187:10; 188:21,22,25;189:8,13; 190:20,22;191:3,6,11, 15,19;192:3,10;193:11, 17,25;194:12,18,21,23; 195:1,6,7;197:24; 198:1,2,4,5,12,18,23; 199:1,3,7,12,16,20,24; 201:9;202:1,3,7,12,17, 23;248:16,19,21,23; 249:1;259:9;268:22; 269:6,11,16,19,22; 270:2,4,6,8,20,22; 271:13;273:5,10; 274:7,13,16;275:11,15; 278:21,23;279:4,8;
---	--	--	---

291:4,15,16,19;292:7,12 <b>Cordry's (2)</b> 30:6;152:7 <b>core (2)</b> 123:21;132:21 <b>corner (1)</b> 295:25 <b>Corporation (1)</b> 4:3 <b>corrected (2)</b> 15:18;137:3 <b>correction (1)</b> 94:6 <b>correctly (10)</b> 16:18;145:8;153:1; 179:23;186:18;208:6; 221:9;246:21;290:4,12 <b>correlate (6)</b> 24:1;25:2,5,17;26:1,3 <b>correlates (1)</b> 24:4 <b>correlation (6)</b> 33:18,20;34:21; 309:24;310:25;311:3 <b>correspond (3)</b> 214:15;282:13; 284:24 <b>Costco (17)</b> 4:3,20,22,24;5:5,7; 8:12;48:1;82:14,22; 86:20,25;103:11; 256:11;262:2;264:1; 306:16 <b>Costco's (3)</b> 6:4;83:7;84:21 <b>count (9)</b> 23:1,23;24:21;35:8; 36:13,17,25;43:14; 56:4 <b>counted (5)</b> 51:24;52:5,7;53:3,6 <b>counting (4)</b> 46:10,21;50:5;194:9 <b>country (1)</b> 310:13 <b>counts (8)</b> 23:4;24:12;29:12; 35:8,9;52:10,12;53:1 <b>County (21)</b> 11:4,10,12;9:9;8:14; 103:13;104:14;105:25; 107:1,5,6,11,16,20; 114:15;118:18,23; 119:4,5,9,13;123:2 <b>couple (12)</b> 5:21;7:19;9:23; 25:25;68:25;71:13; 156:12;167:14;242:8; 269:19,22,25 <b>couple-minute (1)</b> 87:23	<b>course (23)</b> 9:5;25:11;31:9; 35:15;47:6;55:3;62:13; 74:6;90:14;99:2;101:5, 10;102:22;187:25; 189:6;190:9;207:14; 225:2;262:15;280:19; 304:2;307:8;310:2 <b>cover (1)</b> 225:25 <b>covered (4)</b> 118:14,25;120:1; 159:19 <b>crash (1)</b> 6:14 <b>create (3)</b> 10:14;11:7;311:4 <b>creates (3)</b> 11:9;76:13;286:20 <b>creating (2)</b> 10:7;24:7 <b>Creation (1)</b> 6:9 <b>criteria (2)</b> 215:19;223:9 <b>critical (1)</b> 66:13 <b>cross (3)</b> 6:17;267:10,22 <b>cross-check (1)</b> 25:6 <b>cross-examination (14)</b> 6:7;9:14;18:10,17; 88:2;120:16;121:9,14; 172:22;202:21;267:15; 274:3;280:8;311:17 <b>cross-examine (1)</b> 14:11 <b>cubed (3)</b> 154:25;155:3;197:15 <b>Cubic (4)</b> 91:22;92:20;112:1; 301:1 <b>culpability (6)</b> 71:19;74:3;77:8; 109:21;110:3;113:9 <b>cumulative (2)</b> 105:22;242:15 <b>current (2)</b> 135:1;201:11 <b>currently (1)</b> 20:14 <b>cut (3)</b> 59:8;304:9;310:9	34:7;37:20;38:1,2; 39:1,1;49:5,8,23;69:8; 110:11;111:9,20,22; 112:13;113:3,4,23; 117:3;124:14;136:12, 15;151:14;152:24; 155:16,18,21;156:7,10, 13,17,22,25;157:8; 163:13,21;164:25; 165:5;175:8;180:17, 22;184:3;186:2,2; 193:1,23;198:16; 207:8;220:21;222:24; 225:6;233:23;234:11, 12,21;236:1;240:22; 260:16;261:5,7; 290:13,17;298:17; 302:3,14;305:18; 307:18;310:11,16,17; 311:1,2 <b>database (2)</b> 234:3,4 <b>databases (3)</b> 234:1,6,13 <b>date (3)</b> 14:12;223:17;275:3 <b>dated (3)</b> 208:16;209:5;292:21 <b>dates (1)</b> 275:1 <b>daughter (1)</b> 307:21 <b>David (2)</b> 92:23;94:19 <b>day (56)</b> 4:2;8:17;24:22; 28:16;31:10;33:18; 38:11;55:13,20;57:13; 60:8;76:14;82:21;84:6; 102:18;103:16,24; 146:3;163:13,21; 164:25;165:4;167:17; 168:3;170:4;173:12; 187:24;188:13,13; 189:5,5,10,10,11,12,16, 17,19,25;190:1;191:8, 14,19,20,21,21;262:18; 269:3,8;273:22,25; 274:13,15,23;276:4; 291:12 <b>day-by-day (2)</b> 190:3;307:4 <b>days (33)</b> 9:23;53:21,24;55:20; 57:21,21,24;58:8; 59:14;60:7;66:19; 76:14;81:10;165:6,16, 17,21,21,22;166:6,13, 19;167:1;169:24; 173:13;188:4;189:20; 192:14,16,25;193:2,3; 275:4 <b>DC (13)</b>	119:11;122:9,13; 123:13,21;129:7; 131:11;142:25;143:7; 158:11;159:4;183:8; 187:15 <b>deal (6)</b> 9:18;32:12;89:8; 168:25;226:13;249:20 <b>dealing (3)</b> 150:3;238:7;256:2 <b>December (5)</b> 104:16,21,24;105:7; 106:4 <b>decide (2)</b> 59:2;257:17 <b>decided (3)</b> 259:23;273:8,12 <b>decision (2)</b> 4:18;263:9 <b>decision-maker (3)</b> 309:21;310:1,22 <b>Decision-Making (2)</b> 299:17,24 <b>decisions (2)</b> 264:4;265:5 <b>deduced (1)</b> 173:9 <b>default (15)</b> 208:19;209:25; 211:9,14;212:3; 217:15;219:2,13; 221:4;222:2;228:9,11; 231:5;284:15;298:6 <b>defaults (1)</b> 208:11 <b>defense (1)</b> 271:15 <b>define (2)</b> 119:20;122:8 <b>defined (1)</b> 239:25 <b>defines (1)</b> 208:11 <b>defining (1)</b> 73:10 <b>definition (4)</b> 30:7;133:9;237:21; 239:21 <b>degree (2)</b> 77:19;108:9 <b>delay (4)</b> 69:25;72:21;76:6,8 <b>deliberations (1)</b> 260:14 <b>deliveries (2)</b> 82:22;87:13 <b>delivery (2)</b> 86:23;87:2 <b>demonstrate (1)</b> 249:10 <b>demonstrated (2)</b> 233:11,13 <b>demonstrations (2)</b>	219:12;231:4 <b>Dennis (1)</b> 5:14 <b>Department (2)</b> 207:19;215:12 <b>depend (4)</b> 55:3;235:23;236:1,4 <b>depending (2)</b> 75:23;130:18 <b>depends (14)</b> 55:3;73:14,19;87:19; 129:5;132:2;158:12, 15;190:7,7;206:22,23, 24;255:13 <b>derivation (2)</b> 25:9;60:18 <b>derive (1)</b> 39:10 <b>derived (4)</b> 23:17;39:23;284:7, 10 <b>deriving (2)</b> 64:20,21 <b>describe (8)</b> 49:6;90:20;241:10; 244:16;250:6,8; 279:22;290:18 <b>described (8)</b> 47:16;99:16;233:2; 246:5;250:1;284:24; 287:4,10 <b>describes (1)</b> 235:8 <b>Description (2)</b> 89:2;164:16 <b>descriptions (1)</b> 309:6 <b>designated (1)</b> 207:24 <b>designation (1)</b> 221:16 <b>Designations (2)</b> 276:14,20 <b>designed (1)</b> 284:3 <b>desirable (2)</b> 299:22;301:6 <b>detail (6)</b> 49:23,24;189:14; 216:20;223:6;305:3 <b>Detailed (4)</b> 226:1;229:10,11; 285:17 <b>details (1)</b> 203:17 <b>Deterioration (1)</b> 206:25 <b>determination (4)</b> 12:7;104:7;217:11; 258:15 <b>determinations (1)</b> 11:2 <b>determine (12)</b>
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<p>48:22;52:6;62:18,24;                  95:1;216:24;235:13,                  19,21;290:12;306:1;                  311:4  <b>determined (2)</b>                  65:1;311:5  <b>determining (1)</b>                  64:5  <b>developed (7)</b>                  203:20;223:7;                  235:17;236:17;237:1;                  238:2;239:4  <b>developing (1)</b>                  285:5  <b>development (1)</b>                  234:22  <b>deviate (3)</b>                  259:23;266:1,6  <b>deviated (3)</b>                  266:3,13;285:23  <b>deviation (4)</b>                  266:2,7,9,15  <b>deviations (1)</b>                  281:24  <b>devised (1)</b>                  284:8  <b>diagram (2)</b>                  39:14;81:23  <b>diesel (5)</b>                  82:23;84:14,18;85:8;                  238:23  <b>differ (1)</b>                  188:12  <b>difference (21)</b>                  12:14;48:3;56:11;                  58:21;60:12;61:16;                  65:20;111:15;134:4;                  191:7;197:8,9;199:3,                  10,10,12,16;243:23;                  248:4,12;289:8  <b>differences (5)</b>                  128:6;159:17;                  176:15;196:14;243:8  <b>different (62)</b>                  12:17;16:1;18:2;                  43:21;45:3;51:3;57:15;                  60:13;67:11;78:7;87:7;                  94:14;97:13;102:3;                  104:10,11;109:9;                  118:2;124:11;132:1;                  134:13;144:14;146:15,                  15;148:12,25;149:10;                  154:15;168:4,9;                  169:25;171:18;172:2;                  175:18;176:9;185:1;                  193:23;195:16;197:19;                  200:7;201:13;218:8,                  11;221:23;226:20;                  227:18;230:23,23,24;                  231:10;236:10,15;                  238:7;241:20;243:4;                  246:22;257:23;264:6;                  280:25;282:6,14;304:2</p>	<p><b>differently (4)</b>                  238:21;254:18;                  288:3,7  <b>differs (1)</b>                  215:22  <b>difficult (1)</b>                  126:17  <b>difficulty (1)</b>                  287:18  <b>dig (1)</b>                  96:13  <b>digest (1)</b>                  8:24  <b>digging (1)</b>                  213:9  <b>dilution (1)</b>                  77:1  <b>Dioxide (1)</b>                  276:15  <b>direct (20)</b>                  29:5;32:10;33:5;                  34:13;120:17,19;                  121:9,22;122:1;                  129:15;144:17;146:18;                  151:12,16;153:18;                  227:20;240:22;289:16,                  17;298:18  <b>directed (1)</b>                  121:9  <b>direction (4)</b>                  216:10;294:1,17,19  <b>directions (4)</b>                  50:5;294:18,20,21  <b>directly (17)</b>                  15:24;36:14,25;67:4;                  86:11;121:16,22;                  122:11;133:2;140:5;                  183:17;227:22;244:2;                  253:12;285:2;286:16;                  297:5  <b>directors (1)</b>                  215:24  <b>disagree (11)</b>                  112:3;122:18;144:8,                  18;167:23;184:19;                  225:4;231:12,14,16,25  <b>disagreed (6)</b>                  144:3,17,22,22;                  145:4;184:12  <b>disagreeing (3)</b>                  144:5,19,20  <b>disagreement (3)</b>                  122:19;131:2;176:4  <b>disagreements (1)</b>                  95:25  <b>disagrees (3)</b>                  184:6;185:17;222:22  <b>disappointed (1)</b>                  271:19  <b>discharge (1)</b>                  240:10  <b>discovery (1)</b>                  275:24</p>	<p><b>discretion (1)</b>                  259:18  <b>discuss (12)</b>                  12:22;13:5;66:7;                  119:11;178:5;232:5,8,                  11,14;244:13;272:8;                  310:3  <b>discussed (11)</b>                  120:9;122:15;127:8;                  129:9,17,20;182:6;                  230:13;232:9;272:18;                  277:15  <b>discussing (5)</b>                  67:3;70:3;71:6;                  125:18;197:7  <b>discussion (12)</b>                  7:4;34:10;66:17;                  80:14;89:5;105:12;                  120:9;128:18;135:15;                  136:21;178:8;271:18  <b>discussions (5)</b>                  34:13;35:19;122:21;                  124:8;185:24  <b>disk (4)</b>                  49:8,23;69:8;298:17  <b>disks (5)</b>                  31:24;32:3,20;49:5;                  240:23  <b>dispensing (1)</b>                  20:3  <b>dispersion (10)</b>                  58:15,20;59:1;                  135:24;208:20;210:2,                  5,6;305:6,21  <b>display (1)</b>                  66:13  <b>dispositive (1)</b>                  159:22  <b>disproportionately (1)</b>                  54:15  <b>dispute (2)</b>                  11:15;96:3  <b>disputing (1)</b>                  145:7  <b>disregard (1)</b>                  211:1  <b>distance (5)</b>                  81:25;293:23;                  294:21,24,25  <b>distances (2)</b>                  287:6;293:19  <b>distinction (1)</b>                  305:12  <b>distinguish (1)</b>                  168:2  <b>distinguished (1)</b>                  11:23  <b>distinguishing (1)</b>                  29:1  <b>distributed (1)</b>                  6:1  <b>distribution (5)</b>                  78:10;307:8;309:24;</p>	<p>311:3,4  <b>distributional (3)</b>                  301:17;307:1,1  <b>District (25)</b>                  119:4,14,18,18,21,                  22,23;120:4,4,5,6;                  122:7,20;123:19,24;                  124:9;125:15;131:25;                  132:21;133:9,13,19;                  134:9,11,14  <b>diurnal (1)</b>                  31:10  <b>divide (1)</b>                  173:13  <b>Division (1)</b>                  215:23  <b>dock (35)</b>                  83:16;85:12,13;86:6,                  12;116:3;135:19;                  137:18,19;237:8;                  238:18,20,22;239:20;                  240:14;248:8;252:8,                  11,16;287:1,8,24;                  288:18;289:12;295:2;                  296:6,12,18,19,21;                  297:1,7,8,20,23  <b>docks (5)</b>                  83:22;85:2,18;86:1,                  17  <b>document (27)</b>                  13:5;36:21;95:23;                  96:4;99:12;116:25;                  172:10;188:17;208:22;                  209:1;214:11,22,24;                  233:9;235:4;242:5,11;                  244:11;246:7;250:15;                  275:17;278:20;279:3,                  16,20;281:6;298:5  <b>documentation (3)</b>                  62:4;124:8;226:13  <b>documents (36)</b>                  6:2,4,14;8:3,7,10,18,                  21,24;9:8;12:21;13:9;                  14:12;15:1,2,8,12,14,                  22;214:19;235:6;                  249:16;250:9,10,12;                  271:18,22;272:3,8;                  274:13;275:8,19;                  277:19;280:15,17;                  298:5  <b>done (42)</b>                  53:18;74:11;87:23;                  88:1,4;89:14;102:9;                  113:11,17;121:13;                  133:16;135:9;138:9,                  11;143:2;152:8,21;                  166:15;170:5;201:24;                  202:12;207:18;217:5,                  7;218:21;230:25;                  234:21;235:9;236:14;                  245:18;251:25;253:16,                  17;255:17;274:1;                  279:13;288:16;294:1;</p>	<p>300:8,22;309:4,12  <b>Donna (1)</b>                  5:10  <b>dot (4)</b>                  246:11;281:20,20,20  <b>double-check (1)</b>                  202:13  <b>double-checking (1)</b>                  19:13  <b>doubled (2)</b>                  77:9,9  <b>doubt (1)</b>                  200:22  <b>down (33)</b>                  6:20;11:25;37:7;                  46:12;62:13;68:2;                  70:16;71:7,19;73:7,21;                  74:14;79:7,8,12,17;                  80:15;81:6,12,24,24;                  94:13;107:24;114:25;                  137:20;145:8;166:9,                  20;260:20,21;264:9;                  302:9;307:21  <b>download (2)</b>                  146:18;151:12  <b>downloaded (1)</b>                  147:22  <b>down-washed (1)</b>                  243:19  <b>Dr (50)</b>                  5:3,4;6:3;8:19;14:8,                  18;30:8;52:13,18,21,                  23;53:4;54:11;63:3;                  109:4,7,10;122:19;                  124:3,5,8,13;125:6,13,                  21;135:7;140:22;                  141:6,10,21;142:7;                  160:15;176:12;177:21;                  178:6;184:24;185:16;                  186:9;192:6;202:15;                  204:3;205:9;232:8;                  252:1;267:13;268:12,                  13;269:15,16;270:13  <b>draft (1)</b>                  5:25  <b>dramatically (1)</b>                  196:19  <b>draw (2)</b>                  292:21;293:25  <b>drawing (1)</b>                  204:15  <b>drift (1)</b>                  180:16  <b>drifted (4)</b>                  178:17,18,20,24  <b>drive (10)</b>                  73:8,21;78:20;79:6,                  9,17;81:6,12;82:3;86:5  <b>driving (2)</b>                  79:9,21  <b>drop (1)</b>                  189:11  <b>dropped (1)</b></p>
--	---	---	--	--

267:19 <b>dump (1)</b> 9:8 <b>duplicate (2)</b> 169:23;188:3 <b>duplicates (1)</b> 189:5 <b>duplicating (1)</b> 18:3 <b>duplicative (1)</b> 52:1 <b>during (15)</b> 6:7;28:15;31:9; 33:18;56:17,19,20; 58:14,18;59:8,13,14; 60:7;70:14;146:3	11;111:16;125:5; 172:16;193:12;196:3; 197:10;201:8;210:21; 284:2;290:6 <b>either/or (1)</b> 198:12 <b>elaborate (1)</b> 45:7 <b>electronic (1)</b> 90:2 <b>Eleven (2)</b> 200:3,4 <b>elicit (1)</b> 164:10 <b>eliminate (2)</b> 104:1;185:15 <b>else (18)</b> 31:4;48:23;49:1; 109:5;118:7,14;138:5; 141:1;146:19;159:20; 183:5;187:16;197:23; 202:19;232:11;267:4; 269:24;280:18 <b>e-mail (6)</b> 6:6,10;9:12;15:14; 89:25;280:19 <b>e-mailed (2)</b> 15:1;90:4 <b>e-mails (3)</b> 6:1,4,13 <b>embedded (2)</b> 76:17;84:21 <b>emission (9)</b> 61:8,11;68:21;160:7, 9;234:3;252:6;261:3; 263:7 <b>emissions (43)</b> 19:24;22:16,18;49:3; 54:23;55:4;61:10; 76:12;78:3,5,9,11,12; 84:19;196:25;204:4; 234:2;236:6;237:8; 238:19,22;239:24; 241:1;243:7;247:5,17; 250:20;258:16;262:16; 263:16,22,22;264:3; 289:16,17;296:21; 297:1,2,7,21,22; 301:18;306:19 <b>emit (3)</b> 85:21;196:7;298:9 <b>emitted (2)</b> 58:17;286:16 <b>emphasizing (1)</b> 242:13 <b>employed (1)</b> 308:24 <b>employees (1)</b> 256:8 <b>encouraged (1)</b> 305:25 <b>end (8)</b> 16:10;99:13;106:7,8;	207:18;211:17;250:19; 302:24 <b>endangerment (1)</b> 10:15 <b>ends (1)</b> 294:1 <b>enforce (1)</b> 8:8 <b>enforceable (1)</b> 17:4 <b>enough (7)</b> 112:5;195:25; 231:21;264:1;274:21; 287:2;288:22 <b>ensure (3)</b> 193:22;261:15; 265:12 <b>ensures (1)</b> 260:25 <b>enter (3)</b> 80:24;190:24;236:2 <b>entire (9)</b> 30:17;96:11;106:13; 136:3;207:17;212:24; 257:14;279:9,23 <b>entirely (1)</b> 226:20 <b>entirety (2)</b> 50:4;226:5 <b>entitled (2)</b> 91:23;276:14 <b>entrance (4)</b> 29:16;30:16;73:6,7 <b>entrances (2)</b> 29:5;68:14 <b>Environment (2)</b> 207:20;215:12 <b>Environmental (3)</b> 5:15,17;19:11 <b>EPA (139)</b> 10:5,13;15:24;16:2; 98:20;99:3,21;100:15; 102:4,12;104:3;116:5, 16;117:6;128:23; 139:13;141:16;146:15; 147:22,24;148:14; 149:4;150:8,15; 151:13;152:22;156:9; 157:7;165:20;170:10, 15;171:11,12;176:4; 178:2;183:14;185:4,4, 13,18;192:1,4,9,21; 193:18,20;194:6; 201:2,15,20;204:5; 205:21;206:2,7,8,20; 207:2,5,9,11,12,16,18; 208:5,8,11,13,15; 210:9,24;211:13; 216:3,3,13,14,23,23; 217:3;218:25;219:10; 220:14;221:10,13,17; 223:6;225:4,16; 227:12,15,21,25;228:4,	6,15,20;229:21; 230:16;231:1,11; 232:15;233:1;234:3; 241:24;242:4,9;243:1; 247:8;249:10;251:23; 253:15;254:24,25; 255:24;257:16;259:1, 14,22,23;260:13; 261:15;263:25;265:7, 14;266:1,3,3,16; 273:23;280:22;283:2, 25;285:13,16;300:7; 301:5,13;303:22; 304:14;308:17 <b>EPA-approved (1)</b> 226:9 <b>EPA-preferred (2)</b> 208:20;210:2 <b>EPA's (26)</b> 111:25;113:4;116:8; 136:11;139:9;155:15; 169:14;172:24;173:6; 184:18;193:9;206:16; 216:7,7,10;217:5; 235:12;247:7;249:8; 253:7;266:10,12,13; 280:13;301:25;305:21 <b>equal (1)</b> 190:17 <b>equals (1)</b> 155:5 <b>equipment (1)</b> 165:22 <b>equivalent (8)</b> 83:11;175:22;176:1, 3;184:22;186:3; 281:21,23 <b>Erich (1)</b> 4:20 <b>error (5)</b> 164:6;301:14,14; 306:2;309:5 <b>errs (1)</b> 84:22 <b>especially (4)</b> 189:3;192:20;249:8; 302:5 <b>essentially (5)</b> 51:4;104:15;164:18; 210:16;235:11 <b>establish (3)</b> 129:23;235:2;271:11 <b>established (7)</b> 68:8;69:5;130:1,3; 204:5;235:2,4 <b>estimate (8)</b> 27:15;81:2;82:2; 240:25;247:5;252:10; 302:17;307:12 <b>estimated (1)</b> 61:17 <b>estimates (12)</b> 67:13;260:10;	299:18,24;300:3,15,15; 306:1,11;309:23; 310:4,24 <b>estimating (3)</b> 67:15;242:15;261:2 <b>et (1)</b> 309:25 <b>evaluate (10)</b> 10:17,25;11:21; 173:5;182:7;219:10; 231:2;248:5;257:14; 262:11 <b>evaluated (2)</b> 103:22;178:15 <b>evaluating (8)</b> 11:18;56:8;98:23; 99:23;102:7;258:6; 264:19;265:8 <b>evaluation (9)</b> 10:22;12:4;34:6; 56:9;80:25;105:16; 225:6;234:20;242:12 <b>evaluations (1)</b> 234:17 <b>even (20)</b> 9:9;13:4;46:9;50:9; 73:21;86:17;87:17; 137:9;143:6;156:4; 166:13;178:10;196:10; 215:10;232:18;252:14; 260:16;265:1;266:22; 302:11 <b>evening (10)</b> 24:15;34:25;41:18, 22;45:21;52:15;53:9; 56:20;58:17,18 <b>event (5)</b> 103:25;185:13; 213:3;272:6;300:21 <b>events (2)</b> 104:1,2 <b>everybody (3)</b> 14:1;79:14;276:3 <b>everyone (2)</b> 9:6;89:3 <b>everywhere (1)</b> 122:8 <b>evidence (14)</b> 4:17;11:18,21;13:2; 16:13;70:7;75:9,10; 192:22;229:17;242:19, 24;262:3;271:11 <b>evidentiary (2)</b> 229:22;242:23 <b>evolution (1)</b> 105:2 <b>evolve (1)</b> 141:4 <b>evolves (1)</b> 141:1 <b>exact (11)</b> 57:2,3,3;82:21; 99:11;141:8;240:8,23;
---	---	---	--	---

**E**



<p>259:5;260:7;292:24  <b>exactly (23)</b>                  20:14;32:9;34:22;                  37:20;53:22;65:3;                  68:20;89:3;106:5;                  160:2;170:19;185:7;                  187:2;198:2,3;239:17;                  283:24;287:3;288:17;                  293:21,21;294:1;                  295:20  <b>examination (3)</b>                  17:25;18:11;268:5  <b>Examiner (8)</b>                  4:16;110:15;111:3,                  12;216:22;235:10;                  256:4;259:1  <b>examining (3)</b>                  15:12;153:21;242:22  <b>example (24)</b>                  31:6,7;35:9;111:6;                  157:11;173:12;175:9,                  10;178:19;206:5,16;                  236:11;242:7;243:5;                  244:14;255:1,14;                  272:21;300:23;302:4;                  303:2;305:7;309:8;                  310:9  <b>examples (4)</b>                  157:16;242:8;                  244:13;249:9  <b>excellent (1)</b>                  58:15  <b>except (3)</b>                  33:4;67:17;259:23  <b>exception (14)</b>                  4:5;12:5,18;23:6;                  207:2;227:22;256:2,8;                  292:8;294:6,13;                  295:25;296:17;309:16  <b>excerpt (5)</b>                  22:25;94:25;95:23;                  98:4;279:16  <b>excerpts (2)</b>                  19:9;96:5  <b>exclude (2)</b>                  13:9;271:20  <b>excluded (1)</b>                  51:21  <b>excluding (1)</b>                  184:6  <b>Excuse (4)</b>                  40:19;150:13;                  183:16;236:8  <b>exercise (1)</b>                  308:21  <b>Exhibit (103)</b>                  14:4;15:15,21;18:23,                  23;19:6,8,9,10,14;22:2,                  6;23:18;25:3;26:18,21;                  27:8;35:13;38:12;39:2,                  2,4,12,13,13,16;40:24;                  42:5,7;43:11,24;44:1,5,                  12,17,20,20,25;45:3,</p>	<p>10,11;50:3,13,23;                  53:23;56:4,4;66:10,10;                  88:22,24;89:2,22;                  91:13;92:21;94:7,23;                  95:1,2,3,6,13,20;96:23;                  128:15;132:12,12;                  145:17;147:15,17;                  148:6,16;149:6;                  150:10;172:6;205:1;                  206:13;208:15;209:13;                  210:10;211:12;212:8,                  12,16;213:17;214:16;                  221:18;222:8;224:8;                  225:21;228:7;242:11;                  244:18,19,20;247:3,10;                  249:19;250:25;280:12;                  283:17;290:25;292:20  <b>exhibitize (1)</b>                  88:21  <b>exhibitized (1)</b>                  147:13  <b>Exhibits (12)</b>                  5:22;7:5;44:3,8,10;                  86:16;88:23;89:19;                  150:24;152:12;274:25;                  275:9  <b>exist (4)</b>                  11:10,11;33:24;                  275:19  <b>existing (9)</b>                  38:23;40:4,11;41:9;                  42:9;44:3;226:14,15;                  286:3  <b>exists (1)</b>                  285:7  <b>exit (1)</b>                  80:18  <b>expect (13)</b>                  10:3,5;157:13,22;                  158:10;227:21;267:14,                  17,21;274:10;307:2,10,                  11  <b>expected (4)</b>                  99:18;107:19;                  119:25;300:24  <b>expedite (1)</b>                  16:15  <b>expense (5)</b>                  260:19;261:5,17;                  265:21;286:1  <b>experience (4)</b>                  166:14;173:20;                  189:2;301:16  <b>expert (11)</b>                  53:19;74:25;75:4,6,                  8,11;138:10,15;                  158:25;192:9;262:3  <b>experts (1)</b>                  74:6  <b>expert's (1)</b>                  262:11  <b>explain (4)</b>                  109:24;204:3;</p>	<p>296:20;297:6  <b>explained (1)</b>                  138:5  <b>explaining (1)</b>                  164:7  <b>explains (1)</b>                  240:23  <b>explanation (3)</b>                  9:9;191:7;284:22  <b>explicit (2)</b>                  10:6,13  <b>explicitly (1)</b>                  99:19  <b>exposed (1)</b>                  197:6  <b>Exposure (2)</b>                  247:7;279:10  <b>expressed (1)</b>                  260:12  <b>expressing (1)</b>                  114:20  <b>expressway (2)</b>                  157:15,21  <b>extend (3)</b>                  82:4;293:13;295:2  <b>extends (2)</b>                  294:17;295:1  <b>extent (6)</b>                  14:8;57:9;174:12;                  179:8;309:24;311:5  <b>extra (9)</b>                  35:21;89:22;90:13;                  93:4;193:3;209:10;                  213:4,7,10  <b>extraordinary (1)</b>                  103:25  <b>extras (1)</b>                  172:8  <b>extreme (4)</b>                  38:16;41:2;115:13;                  302:10  <b>extremely (11)</b>                  10:9;28:10;125:25;                  138:22;177:17,25;                  285:11;287:4,13;                  301:4;307:13</p>	<p>113:22;124:22;125:16,                  23;126:5;129:3;                  131:23;139:17;140:14;                  141:13;142:17;145:7;                  150:20;156:2;158:20;                  164:19;167:5;179:17;                  184:13;186:5;193:2;                  194:9;200:21;201:16;                  230:2;244:1;250:10;                  252:13,13;265:17;                  271:3,10;274:10;                  277:5;283:5;284:17  <b>factor (19)</b>                  58:13;59:17;76:15;                  140:18,21;160:3;                  197:1;217:18;225:24;                  300:5,19;301:10,22;                  303:10;304:15;306:19,                  24,24;307:14  <b>factors (12)</b>                  55:15;58:20;77:13;                  78:8;104:3;115:16;                  125:24;126:6;140:24;                  233:7;234:4;235:14  <b>factory (1)</b>                  116:18  <b>facts (1)</b>                  276:6  <b>fact-specific (1)</b>                  159:23  <b>fail (1)</b>                  300:11  <b>fair (12)</b>                  14:16;54:2;66:5;                  123:18;131:5;212:20;                  231:21;258:12;259:22;                  262:10;266:21;305:9  <b>fairly (3)</b>                  189:7;240:15;242:7  <b>fairness (4)</b>                  152:9,13;262:7;                  276:2  <b>fall (2)</b>                  163:3;292:22  <b>falls (1)</b>                  58:4  <b>familiar (2)</b>                  18:25;52:13  <b>far (11)</b>                  20:13;51:11;54:3;                  73:19;127:1;130:19;                  133:3;137:9;254:1;                  271:3;295:1  <b>fashion (1)</b>                  164:1  <b>fast (3)</b>                  42:8;67:7;203:1  <b>favorite (1)</b>                  299:7  <b>feasible (1)</b>                  101:11  <b>feature (2)</b>                  291:9,10</p>	<p><b>February (6)</b>                  20:20;21:6;77:11;                  109:25;112:14;144:16  <b>federal (6)</b>                  176:1;184:22;186:3;                  192:14,16;276:13                  federalregistergov/a/a/2012-23150 (1)                  276:16  <b>feel (4)</b>                  9:5;81:1;115:13;                  145:10  <b>feeling (2)</b>                  36:4;271:17  <b>feels (2)</b>                  110:1;164:6  <b>feet (11)</b>                  240:21;241:3,4,5;                  252:7,10;294:10,11,11,                  12,17  <b>felt (3)</b>                  81:1;112:4;283:5  <b>FEM (1)</b>                  194:1  <b>FEMs (1)</b>                  194:7  <b>few (3)</b>                  8:3;145:12;249:15  <b>field (2)</b>                  173:20;175:8  <b>figure (42)</b>                  22:19;23:17;24:7,11,                  25;25:4;26:21;27:8;                  29:22;31:1;34:8;48:7,                  14;61:24;64:2;74:22;                  95:5;112:8;133:8;                  144:4;183:21;201:4;                  204:17,24;281:10,11,                  17,19,19;282:11;283:3,                  19;284:23;287:16;                  292:23;293:2,24;                  294:3,4,7;295:7;297:6  <b>figures (8)</b>                  24:11;39:3,10;45:5;                  61:21;65:3;77:15;                  292:23  <b>file (1)</b>                  213:9  <b>filed (2)</b>                  5:22,25  <b>files (13)</b>                  32:7;34:5;47:13;                  49:4,5;68:17,20;77:5;                  80:9;96:14;240:22;                  278:16;290:18  <b>filled (4)</b>                  82:23;85:13,19,22  <b>filling (2)</b>                  4:7;19:19  <b>film (2)</b>                  291:9,10  <b>filter (6)</b>                  165:2,2,3,4;170:5,18  <b>final (9)</b></p>
---	--	--	---	--

<p>5:24;41:11;94:9;                  98:7;246:11;265:5;                  273:22,25;276:15  <b>finally (1)</b>                  66:7  <b>find (34)</b>                  16:22;26:2;39:20;                  43:2;71:22;99:11;                  113:15;122:5,22;                  124:1;126:9;137:20;                  160:6;169:1;180:19;                  182:11;185:7;188:11,                  16;194:6;220:22;                  245:3;248:21;256:5;                  259:9;260:1,7;278:3;                  283:18;284:1;285:14;                  291:16;292:3;309:11  <b>finder (1)</b>                  230:3  <b>finding (2)</b>                  10:6,13  <b>fine (7)</b>                  14:8,10;60:4;93:19;                  122:20;203:10;292:2  <b>finish (28)</b>                  14:17,18,21,23;                  18:21;59:21,22,25;                  60:3;100:4,7;110:21;                  111:22;112:13;161:19,                  21,24;163:7;211:24;                  253:15;257:4,6;                  267:12,14,17,21;                  268:19;273:17  <b>finished (1)</b>                  304:12  <b>firm (2)</b>                  230:14;232:25  <b>first (41)</b>                  54:9;58:23;90:21,24;                  91:21;105:11;106:7;                  116:25;122:6;132:7;                  135:11;147:3;149:11;                  155:6;161:18;164:13;                  167:9,17,23;168:10;                  183:7,10;185:19;                  188:10;203:20,24;                  209:24;210:8;217:17,                  18;223:7;229:6;238:1,                  1;239:2;242:11;                  243:22;244:25;261:12;                  263:18;265:7  <b>first-order (1)</b>                  234:5  <b>fit (2)</b>                  11:14;257:15  <b>five (23)</b>                  59:13;79:1,4,6,10,24,                  25;80:6,7,10,18;                  134:17;144:13;202:1,                  24;219:19;266:22;                  272:12;282:19;289:18;                  298:20;307:16;308:3  <b>five-foot (1)</b></p>	<p>243:11  <b>five-minute (1)</b>                  88:11  <b>five-prong (1)</b>                  223:8  <b>fixed (2)</b>                  259:19;290:22  <b>flash (1)</b>                  202:11  <b>flat (1)</b>                  57:9  <b>fleet (4)</b>                  84:15,16,17;85:5  <b>flexibility (1)</b>                  198:14  <b>floor (2)</b>                  4:14;280:2  <b>flow (4)</b>                  31:9;61:11;65:17;                  281:8  <b>fluke (1)</b>                  103:24  <b>focus (6)</b>                  127:12;135:19,22;                  136:6;137:16;139:14  <b>focused (5)</b>                  7:5;13:1;116:1;                  135:16;136:14  <b>focusing (4)</b>                  135:15;136:20;                  137:22,24  <b>folks (1)</b>                  122:16  <b>follow (10)</b>                  127:14;139:12;                  182:5;192:2,7;215:15;                  217:3,7;225:16;287:21  <b>followed (5)</b>                  207:5,7;223:6;235:2;                  259:22  <b>following (11)</b>                  170:18;185:18;                  216:7,13;247:3;                  259:14;261:16;286:3,                  6,7;309:13  <b>follows (6)</b>                  212:6;213:20,23;                  217:16;219:16;231:8  <b>follow-up (1)</b>                  304:14  <b>forest (2)</b>                  130:16;293:13  <b>forget (3)</b>                  53:22;128:22,25  <b>form (1)</b>                  16:10  <b>forth (18)</b>                  10:1,8;22:14;33:13;                  34:8;48:1;49:4;62:15;                  68:19;77:16;79:22;                  107:23;125:9;130:17;                  225:7;227:2;249:15;                  265:14</p>	<p><b>Forty (1)</b>                  290:8  <b>Forty-six (2)</b>                  154:21;155:5  <b>forward (2)</b>                  216:3;256:11  <b>found (3)</b>                  35:21;41:5;145:12  <b>foundation (1)</b>                  235:9  <b>four (8)</b>                  42:16;46:17;52:2;                  82:4,23,25;267:10;                  308:3  <b>four-year (1)</b>                  141:3  <b>Fox (29)</b>                  208:17;209:4,5;                  214:22;215:16,23;                  217:14;221:11,12,20,                  21,25;223:15;233:3,6;                  242:4,4;244:11;245:8;                  249:25,25;250:3,9,17;                  252:2;277:14;280:19;                  281:2;284:1  <b>fraction (2)</b>                  31:15;85:8  <b>frankly (4)</b>                  196:2,5;219:8;227:2  <b>free-flow (2)</b>                  25:12;71:14  <b>frequency (4)</b>                  74:13;309:24;311:3,                  4  <b>frequent (1)</b>                  75:23  <b>frequently (2)</b>                  75:2;188:5  <b>FRMs (1)</b>                  193:21  <b>front (9)</b>                  86:2;87:14;88:18;                  96:19;97:3;103:5;                  188:18;201:21;209:8  <b>frustrate (1)</b>                  199:22  <b>full (23)</b>                  31:14,15;76:11;81:6,                  10;86:18;87:12;                  156:20;162:2;163:22;                  164:17;167:9,15,17,24;                  168:1,12;209:23;                  216:6;236:25;242:11;                  279:16;280:17  <b>full-time (5)</b>                  161:13,15;162:3;                  164:24;165:9  <b>fully (2)</b>                  57:8;218:16  <b>fun (1)</b>                  291:5  <b>function (2)</b>                  178:17;298:19</p>	<p><b>furnished (1)</b>                  193:11  <b>further (10)</b>                  7:15;63:20;73:22;                  209:6;212:1;263:13;                  264:2;299:22;311:8,11  <b>Furthermore (3)</b>                  247:4;251:6,11  <b>future (1)</b>                  133:15</p>	<p><b>generally (13)</b>                  71:22;87:3;99:2;                  130:23;167:4,16;                  196:9;203:19;206:18;                  247:14;253:5;258:8;                  299:20  <b>generated (2)</b>                  234:13;235:22  <b>generic (1)</b>                  280:5  <b>generally (1)</b>                  245:23  <b>geographic (4)</b>                  119:16;147:8;306:8,                  12  <b>geographical (1)</b>                  306:6  <b>geography (1)</b>                  119:3  <b>George's (1)</b>                  119:5  <b>Georgia (5)</b>                  30:21;136:8;137:10;                  242:6;246:23  <b>gets (4)</b>                  45:7;64:3;140:3;                  181:19  <b>given (8)</b>                  18:22;39:9;83:9;                  121:19;136:14;274:3;                  296:21;305:5  <b>gives (1)</b>                  104:6  <b>giving (3)</b>                  20:25;242:21;279:9  <b>glanced (1)</b>                  145:12  <b>glasses (1)</b>                  36:3  <b>global (2)</b>                  10:4;275:13  <b>goal (3)</b>                  258:14;261:16;                  265:19  <b>Goecke (108)</b>                  4:24,24,25;5:23;6:2,                  19,21,23;7:2,4,9;8:2,6,                  13;17:14;3:6,15,20,25;                  16:25;40:19,23,25;                  41:5;45:13,15;59:21;                  70:18,21;75:4,14,17;                  88:17,20;89:1,5,9,21,                  23;90:1,5,6,10,14,16;                  92:11;93:8;95:3;96:16;                  97:5;100:25;103:7;                  110:21;114:23;118:21;                  127:19;129:12,15;                  132:6;133:4;140:1;                  149:8,13;150:6;                  151:20;152:6;157:24;                  163:6;165:25;171:4,                  12,25;172:10,16,19;                  188:20,24;194:11;</p>
--	---	--	--	---

<p>198:11;205:4,7;                  209:11;213:13;257:6;                  261:25;262:18,23;                  263:10,17;268:21;                  269:14,21;270:7;                  271:19;273:14,16,19;                  274:5,24;275:3,7,13;                  276:24;277:3,6,12,19,                  23  <b>Goecke's (1)</b>                  12:21  <b>goes (17)</b>                  20:8;32:15;46:15;                  54:3;84:8;93:9;113:15;                  149:19;170:4;183:4;                  219:2,7;247:12;                  264:18;265:11;271:2;                  310:22  <b>gold (13)</b>                  175:3;176:5;184:18,                  18;185:5;192:1,8,21,                  23;193:8,19,21;194:2  <b>gold-standard (3)</b>                  165:11;175:11,24  <b>Good (15)</b>                  4:20,22;5:6,8,9;                  103:18;196:21;203:8,                  16;247:15;266:19,23;                  272:19;308:6;311:18  <b>gov (2)</b>                  246:16,16  <b>govern (1)</b>                  280:18  <b>government (1)</b>                  292:4  <b>governmental (1)</b>                  227:23  <b>gram (1)</b>                  58:17  <b>granted (1)</b>                  211:25  <b>graphically (1)</b>                  281:9  <b>great (4)</b>                  32:12;90:13;277:6;                  299:10  <b>greater (1)</b>                  250:6  <b>green (2)</b>                  147:1,2  <b>Greenhouse (5)</b>                  6:10;10:7,13;11:5,10  <b>GROSSMAN (687)</b>                  4:2,16,21,23,25;5:2,                  4,9,11,13,16,18,20;                  6:22,24;7:3,8,12,17,19,                  21,24;8:2,5;9:11;10:2,                  16,20,24;11:15;12:11,                  14,25;13:12,14,24;                  14:2,5,14,16,21,24;                  15:16,18;16:11,18;                  17:1,5,8,12,16,21,23,                  25;18:4,7,15;19:8;</p>	<p>23:11,13;24:19;26:4,                  10,13;30:1,4,5,12;                  31:12,17;32:9,17;33:1,                  4,7,10;35:23;38:6,15,                  20;39:6,8,12,20,22;                  40:6,14,22;41:2,4,6;                  42:15,19,22,25;43:4,6,                  9,11,14,17,20;44:8,13,                  19,22,24;45:2,6;47:17;                  48:2,5,10,17,21,25;                  49:17;51:4,6,8;54:2,8,                  17;58:9;59:22,25;60:2,                  14,16,21;62:9,20;63:7,                  14,19,25;64:7,9;65:25;                  66:2,4;69:10,13;70:23,                  25;75:11,16,21;76:1;                  81:16;82:6;87:9,21,25;                  88:6,10,15,19,21;89:2,                  4,6,10,12,17,21,24;                  90:2,8,18,22;91:1,5,8,                  9,11,21;92:1,4,15,18,                  24;93:10,12,17,22,24;                  94:1,5,11,13,17,19,21;                  95:9,12,15,18;96:13,                  17,21;97:1,4,6,8,13,16,                  18,21,25;100:3,7,9,24;                  101:1,23,25;103:2;                  104:23;105:3,6;                  106:19,21;111:16;                  112:4,20;113:8,19,21,                  25;114:2,4,9;117:12,                  14,18,21,25;118:4,6,                  13,25;120:15,24;121:2,                  4,8,13,19,24;122:2;                  123:5,9;126:14,17,19;                  127:20,23;128:8,12;                  129:14,16,18,22;130:3,                  5;131:7,9;132:7,11;                  133:7,11,20,23;134:4,                  10,16,23;135:2,4;                  138:1,4,8,10,17;                  139:21;140:1,2;141:9,                  14,18,21,23;142:3,7,                  10;143:11,14,19,22;                  145:16;146:5,9,17;                  147:1,5,12,16,19,24;                  148:2,4,9,13,19,22;                  149:4,12,14,17,20,22,                  24;150:2,5,8,14,15,18;                  151:3,7,25;152:2,5,9,                  15,20;153:3,6,10,16,                  18,20;154:10,12,14,17,                  19,21;158:1;159:11,13,                  16,19,24;160:2,23;                  161:1,21,24;163:5,7;                  164:2,5,10;167:8,12,                  19,22;168:10,20,22;                  169:4,7;170:10,13,15;                  171:5,10;172:1,5,15;                  174:7,10,14,17,20;                  176:17;178:22;179:16;                  180:6,8,24;181:2,7,11,                  14,21,23,25;182:4,10,</p>	<p>13,21;183:16,19,23;                  184:4,17,24;185:8,20,                  22;186:9,13,17,20;                  187:8;190:20,23;                  191:4,10,13,16,23;                  192:5;193:7,15;                  194:14,19,22,24;195:2;                  197:22,25;198:3,14,20,                  22,25;199:2,9,15,18,                  22;201:7,25;202:2,4,                  14,20,24;203:2,6,8,9,                  11;204:18,22,25;205:4,                  11;209:13,16;210:5;                  212:20,25;213:2,6,8,                  22;218:19;219:20,22;                  220:1,5,8,10,13,19;                  221:8,13,19,22;222:3,                  11,16,19;223:10,14,17,                  20,22;224:4,7,9,12,19;                  225:19;227:6,25;                  228:14,19,23;229:1,5,                  9,24;230:5,9;231:12,                  15,17,21,24;236:23;                  239:20;240:1,5,11;                  241:6,11,18,21,24;                  242:10;244:20,24;                  245:13,16,21;247:2,12;                  248:3,18,20,22,24;                  250:18,22,24;251:2,4,                  6,8,10,13,15;252:15;                  254:1,8,12,15,19;                  255:3,9,12;257:6,9;                  258:2,6;259:7,10;                  260:8,20;261:18;                  262:2,9;264:10,13,16,                  23;265:2,4,22;266:19,                  21,24;267:1,7,11,16,                  19,23;268:1,4,9,14;                  269:4,25;270:3,5,14,                  17,21;271:5,14,17;                  272:2,5,6,24;273:2,8,                  12,15,18,21,23;274:12,                  14,19;275:2,6,22;                  276:8,11,18,23;277:9,                  25;278:4,7,11,17,24;                  279:7;280:2,6,9,21;                  282:22;283:3,8,14;                  286:8,18,23;287:15,18;                  288:2,6,23;289:2,4,6,8,                  14,20;291:1,5,8,10,13,                  15,22,24;292:3,10,14;                  294:3;295:9,11,14;                  296:9,11,23;299:6;                  301:20;302:16,22,25;                  303:9,13,17;304:1,5,                  11;305:11;307:19,22,                  25;308:5,8;311:10,13,                  15  <b>Grossman's (2)</b>                  243:17;249:5  <b>ground (5)</b>                  197:25;240:2,3,4,10  <b>ground-based (1)</b></p>	<p>237:12  <b>ground-level (5)</b>                  211:4;249:21;250:5,                  16;251:24  <b>group (1)</b>                  296:3  <b>guarantee (2)</b>                  268:19;275:17  <b>Guckert (28)</b>                  21:24;23:25;25:13;                  26:17;29:12;34:12;                  39:17;40:3,3;44:5,20,                  20;45:13,14;52:16;                  53:3,5,10,21,25;55:14,                  22;56:4;61:17;66:12;                  69:22;79:23;80:22  <b>Guckert's (28)</b>                  21:10;22:2;23:18;                  24:1,11;25:3;33:21;                  34:5,8,22;35:1,20;38:1,                  2;41:9;43:11;44:9,11;                  48:17;50:13,23;53:13;                  55:12,21;62:7;66:10,                  19;70:14  <b>guess (15)</b>                  8:17;15:10;36:16;                  47:10;62:15;63:1;91:4;                  94:9;146:20;149:23;                  181:2;219:23;262:10;                  295:5,6  <b>guidance (47)</b>                  136:11;139:13;                  156:9;207:5,7;208:15;                  209:2,7;210:25;216:3,                  7,8,12,14,23;217:3,6;                  220:14;221:17;223:6;                  224:2;225:16;227:25;                  249:8;253:8;259:14,                  17,19,23,24;260:2;                  261:15;264:2;265:13,                  18;279:21;280:13,15,                  23,25;283:25;284:14,                  18;285:13,16;304:15,                  20  <b>guideline (8)</b>                  117:6;206:15;211:8,                  9;261:10,14;264:19;                  285:18  <b>guidelines (24)</b>                  185:18;206:10,12,                  16,17;208:5;215:16;                  261:5;265:7,14,16;                  266:8,11,12,13,16;                  285:21,23,24,25;286:3,                  6,7;309:18  <b>H</b>  <b>half (7)</b>                  47:9;49:10;146:4;                  200:1,2,4,5  <b>halfway (3)</b>                  37:6;166:9;263:19</p>	<p><b>hand (11)</b>                  35:18;201:23;216:9;                  217:8;226:16;227:7,                  11;285:7,20,21;300:9  <b>handed (5)</b>                  88:17;96:5;212:20,                  22,23  <b>handle (1)</b>                  16:24  <b>handled (2)</b>                  49:6;297:6  <b>handling (1)</b>                  281:25  <b>handwritten (1)</b>                  36:9  <b>handy (1)</b>                  240:18  <b>Hang (1)</b>                  209:10  <b>Hanna (1)</b>                  252:1  <b>happen (5)</b>                  78:11;89:21;167:6;                  181:23;307:11  <b>happened (4)</b>                  61:11;139:19;                  140:21;282:22  <b>happening (3)</b>                  59:13;288:10,15  <b>happens (12)</b>                  58:18;59:13,14;60:7,                  8,9,10;73:24;74:14;                  84:20;158:20;189:16  <b>hard (4)</b>                  9:6;64:5;79:10;                  150:24  <b>hard-pressed (1)</b>                  62:23  <b>HARRIS (23)</b>                  4:22,22,23;91:6;                  92:7,10,12;93:1,4;                  96:23;213:12;262:22;                  267:3,9,13;268:12,16;                  270:14;273:11,22,25;                  274:6;291:9  <b>HDDVs (1)</b>                  83:2  <b>head (8)</b>                  66:4;95:10;123:16;                  177:8;215:21;239:7;                  240:16;294:23  <b>headed (1)</b>                  181:2  <b>heading (1)</b>                  299:15  <b>health (13)</b>                  10:7,14;11:8;143:6;                  256:6,6,7,17;258:1;                  264:18,25;270:10;                  272:11  <b>hear (9)</b>                  66:12;216:11;                  222:22;227:7;229:17;</p>
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242:24;257:5,8;285:8 <b>heard (7)</b> 28:17;66:21;130:7; 226:22;230:5;258:22; 311:13 <b>hearing (29)</b> 4:3,12,14,14,16;6:6, 15;8:4;9:1,5;10:10; 12:5,18,22;52:18; 74:23;83:23;110:15; 111:3,12;135:1; 216:22;235:10;256:4; 258:25;275:1,3;276:4; 311:20 <b>hearings (3)</b> 8:14;114:8;273:17 <b>hearsay (2)</b> 174:9,9 <b>heart (2)</b> 119:23;248:10 <b>heavily (2)</b> 80:23;131:24 <b>heavy-duty (15)</b> 82:13,19,23;84:13; 85:9,11,19,21,23;86:1, 2,5;87:14;158:24; 238:23 <b>height (12)</b> 239:5,5,8,11,17; 240:2,9,13,23,25; 241:2;243:7 <b>Heights (10)</b> 5:1,10;243:4,8,12; 252:2,5,6,11,12 <b>Hello (1)</b> 203:15 <b>help (4)</b> 89:5;133:6;279:20; 307:25 <b>helpful (5)</b> 13:25;271:21; 272:18,20;279:2 <b>helps (1)</b> 247:2 <b>here's (1)</b> 208:11 <b>hiding (1)</b> 291:17 <b>high (23)</b> 76:13,14;108:24; 124:23;132:2;163:24; 178:11,18,20;180:21, 21;186:5;189:11; 190:13,18,18;239:17, 18;252:10;288:13; 298:7;309:24;311:6 <b>higher (46)</b> 40:11;41:10,14;42:2, 3,4,4,9;52:16,20;53:9, 10,24;54:19;56:6,15, 19;57:6,8,13,24;58:16; 59:9;61:6;63:4;65:12, 14,21,24;77:2;78:6;	99:18;108:25;119:25; 129:7;132:15;140:16; 143:5;157:14,22; 159:4;173:24;180:16; 190:19;196:19;252:13 <b>highest (57)</b> 57:16;61:4,9;63:13; 64:5;98:13;102:16,17, 20,22;103:3,12,14,15, 23;104:9,14;106:12, 18;107:1,3;108:15; 114:14;117:3;118:18; 122:22;123:1,7; 124:20;125:21;128:4, 17;129:2,24,24;130:1, 6,10;132:18,19;135:8; 138:21;139:9;140:10; 142:14,17;144:24; 145:3,6,8;160:16; 177:3;181:17;182:22; 183:13;184:5;201:18 <b>highlight (1)</b> 242:13 <b>highlighted (1)</b> 132:13 <b>highlighter (2)</b> 292:13,14 <b>highway (3)</b> 158:11;246:22; 302:10 <b>history (1)</b> 74:24 <b>hit (1)</b> 307:7 <b>hits (1)</b> 77:2 <b>Hlinka (6)</b> 5:14,14,17,19; 230:14;232:5 <b>Hold (14)</b> 60:16;94:11,11,11; 100:3;150:25;161:1, 21;163:5,5;164:2; 195:16;262:2,17 <b>home (4)</b> 93:20;135:16;254:6; 258:17 <b>homes (4)</b> 10:12;196:24;197:2; 256:17 <b>hone (1)</b> 128:12 <b>Honor (1)</b> 259:9 <b>hope (3)</b> 14:21;271:23;274:2 <b>hoping (1)</b> 13:22 <b>horse (1)</b> 130:7 <b>hour (58)</b> 24:21;28:2,4,15; 29:3,30;20,24,25;	32:24;37:7,8,16;38:17; 41:23;45:21;56:2,18, 25;57:16;58:4,24;59:2; 60:17,19;61:4;63:18, 21,22;65:14,15;71:14; 77:24;78:2,3,5,7,24; 79:6,10,15,24,25;80:4, 11,13;82:20;102:17; 103:15,16;106:13; 116:13;146:4;253:13; 268:11;281:12;290:21, 21,23 <b>hour-by-hour (2)</b> 234:12;305:15 <b>Hourly (7)</b> 161:16;163:21; 164:25;173:11;175:2; 176:12;177:15 <b>hour-of-day (1)</b> 30:22 <b>hours (28)</b> 14:10;15:4;21:2,13, 20;28:4;33:12;41:19; 44:6,18;55:12;57:13, 23,25;60:8;61:6,6; 76:14;78:2;82:21; 85:23;155:22;156:5,5; 267:10;271:1;274:3; 283:15 <b>Howard (2)</b> 160:20;162:19 <small>http://www.epa.gov/ttn/naaqs/standards/noc/data/20081121_no2_1_01</small> 246:9 <b>HU (1)</b> 160:19 <b>huge (3)</b> 199:12,16;214:11 <b>human (2)</b> 10:6;11:8 <b>hungry (2)</b> 202:5,6 <b>hypothetical (5)</b> 73:23;75:1,9;82:25; 158:18 <b>hypotheticals (1)</b> 310:17 <p style="text-align: center;"><b>I</b></p> <b>I-710 (1)</b> 158:6 <b>I-95 (5)</b> 158:4,23;159:4,22; 160:3 <b>idea (5)</b> 70:11;73:23;109:11; 152:22;272:19 <b>identification (10)</b> 88:25;91:14;92:22; 94:8,24;95:21;148:7, 17;149:7;150:11 <b>identified (2)</b> 240:17;244:8	<b>identify (5)</b> 4:19;244:10;245:10; 305:25;306:11 <b>idle (4)</b> 83:8,21;84:3,21 <b>idles (5)</b> 82:24;83:6,9,10,16 <b>idling (21)</b> 11:9;46:20;70:4; 82:19;83:4,11,14,17; 84:6,8,25;85:11,19; 87:16;270:24;271:1,3; 297:17;298:9,9,19 <b>ie (2)</b> 82:19;98:16 <b>if-anybody-were-looking-at (1)</b> 126:15 <b>ignore (1)</b> 265:17 <b>ignoring (1)</b> 244:1 <b>II (13)</b> 110:14,20,24;111:2; 204:12;236:13;282:11; 283:18;284:6;287:15, 19;289:22,25 <b>III (21)</b> 110:14,20,24;111:3, 6;204:13;236:13; 284:24;285:8,22; 286:11,24;287:20; 288:3,23;289:1,2,3,25; 300:23;303:1;307:14 <b>illustrative (2)</b> 290:25;292:21 <b>immediately (2)</b> 244:6;286:5 <b>impact (3)</b> 10:17;58:16;75:22 <b>impacts (9)</b> 71:19;74:3;105:22; 116:2;137:19;158:23; 196:11;248:9;258:1 <b>implication (2)</b> 218:22,24 <b>imply (1)</b> 309:9 <b>implying (2)</b> 101:17;106:12 <b>important (10)</b> 58:13,20;230:16; 253:21;254:24;255:5; 271:21;277:11;287:13; 292:3 <b>impossible (1)</b> 244:5 <b>impractical (1)</b> 77:23 <b>inadvertently (1)</b> 6:1 <b>inapplicable (1)</b> 120:7 <b>inappropriate (4)</b>	179:1;197:18; 200:19;262:11 <b>include (7)</b> 4:7;51:12;76:7; 119:4,14;141:12;207:8 <b>included (8)</b> 49:19;51:13;52:10, 11;72:10;85:7;211:23; 214:10 <b>includes (3)</b> 223:5;309:22;310:23 <b>including (7)</b> 22:9;76:25;77:18; 124:3;158:5;219:3; 249:13 <b>incorrect (9)</b> 43:21;115:19; 125:24;126:6;127:2; 136:24;139:18;200:13, 15 <b>increase (3)</b> 54:4,13;71:25 <b>increased (1)</b> 54:22 <b>increases (1)</b> 74:4 <b>independent (1)</b> 146:7 <b>indicate (5)</b> 47:20;54:12;58:2; 69:25;86:16 <b>indicated (8)</b> 27:24;69:23;80:16; 95:25;111:5;244:7; 267:5,10 <b>indicates (2)</b> 47:8;286:21 <b>indication (2)</b> 16:12;25:23 <b>individual (2)</b> 13:19,20 <b>industrial (1)</b> 309:10 <b>industrialized (1)</b> 129:11 <b>industries (1)</b> 260:13 <b>information (12)</b> 15:5;39:2;69:21; 87:7,15;158:18;169:2; 276:4;302:7;309:20; 310:1,21 <b>infrequently (1)</b> 84:13 <b>inherent (1)</b> 12:9 <b>inherently (3)</b> 11:9,12;242:14 <b>initial (2)</b> 8:20;98:19 <b>initially (5)</b> 28:1;135:13;176:11; 178:18;232:9
--	---	---	--	--

<p><b>initials (1)</b> 129:1 <b>input (3)</b> 15:25;187:6;305:20 <b>inputs (2)</b> 234:6;284:15 <b>Inset (1)</b> 45:21 <b>inside (35)</b> 24:14;30:20;77:24; 115:11;116:2;135:19, 19;136:6;237:20,20, 23;238:13;243:24; 244:5;252:21,24; 253:4,6,17;254:4,9; 255:7,7,9;257:13; 283:6;286:4;287:23, 24;294:7;296:17,19, 22;297:9,19 <b>insignificant (1)</b> 75:23 <b>install (1)</b> 263:6 <b>instance (12)</b> 25:1;29:14;34:23; 43:2;71:6;78:16;134:9; 136:25;137:10;145:6; 183:6;197:12 <b>instead (2)</b> 35:16;282:4 <b>institutions (1)</b> 7:7 <b>instruct (1)</b> 206:25 <b>intelligent (2)</b> 276:5,11 <b>intending (2)</b> 184:22;267:4 <b>intercomparison (1)</b> 193:24 <b>interest (1)</b> 260:11 <b>interesting (1)</b> 66:7 <b>Internet (2)</b> 245:6;246:8 <b>interpret (3)</b> 110:11;113:9;309:8 <b>interpretation (2)</b> 223:1;308:19 <b>interpreted (2)</b> 24:11;302:13 <b>interrupt (1)</b> 304:11 <b>Intersection (100)</b> 6:12;24:14;25:1,18, 18;26:8,8,9,15;27:1,3, 4,14;29:14,15,19; 30:15,15;34:20,20,24; 35:5,11;36:2,15;37:1, 4;38:13,17;41:1,10,15; 45:20;46:10,11,15,15, 20;47:1,5,6,7,9,14,18;</p>	<p>48:12,15,16;49:15; 50:2,4,11,14,18,21,23; 51:2,8,11;52:3,16,24; 53:1,3,6;55:4;56:2,5, 10;62:12,12;64:18,18; 65:20;66:15;67:14,17, 18,20,22,24;68:2; 69:16,17,17,19;70:9, 17;71:7,8,13,24;72:19; 73:5,11,13;76:12; 77:21;137:11;307:5 <b>intersections (18)</b> 23:24,25;24:1;25:3, 12,13;27:9;29:4,6; 33:20,21;40:5;49:3; 65:7;67:7;68:7,24;72:9 <b>into (37)</b> 12:18;18:21;31:20; 35:7,10;70:12;72:7; 74:9,15;76:5;77:13,14; 79:5;80:24;81:11;87:3, 3,5,9,10;114:25; 123:24;125:2;140:25; 168:25;181:7;192:22; 197:25;203:17;219:9; 233:9;242:22;270:9; 293:13;300:12;305:2; 309:6 <b>investigate (1)</b> 127:15 <b>investigation (1)</b> 127:12 <b>inviting (1)</b> 246:1 <b>involve (2)</b> 151:15;228:15 <b>involved (11)</b> 47:22;122:16;124:2; 131:17;207:9;210:12; 215:13,13;227:4,22; 235:7 <b>involving (1)</b> 29:6 <b>irrelevant (2)</b> 129:15;227:12 <b>isopleths (1)</b> 295:8 <b>issue (19)</b> 11:17,17,22;76:23; 79:4;85:3;100:12; 140:20;182:5;191:24; 227:10;272:20,21,22, 22;283:22;286:2; 287:22;291:21 <b>issued (4)</b> 9:23;209:5;214:22; 215:23 <b>issues (15)</b> 67:2;77:7,19;78:4; 96:2;145:4,13;159:23; 192:21;207:25;232:9; 233:18;237:16;272:11; 273:20</p>	<p style="text-align: center;"><b>J</b></p> <p><b>January (11)</b> 21:9;96:5,17;104:25; 106:6;107:21,25; 138:24;177:24;186:24; 195:19 <b>jobs (1)</b> 9:20 <b>judge (4)</b> 55:11;158:19;262:7, 8 <b>judgment (32)</b> 6:25;113:8,11; 115:15;122:16;124:2; 131:1,16;156:24; 158:3,8;159:1;178:2; 179:11,11;196:8; 216:16;238:14;243:25; 255:18,21;257:12,20; 259:19,20;284:20; 300:24;301:3;302:13, 15;306:14;307:13 <b>judgments (2)</b> 74:2;285:10 <b>July (1)</b> 139:17 <b>jump (2)</b> 42:8;110:12 <b>June (12)</b> 114:13,17;115:9; 208:16,17,24,25; 261:22;262:19,20,21; 307:5 <b>jurisdiction (1)</b> 17:14 <b>justification (4)</b> 183:23;211:17; 219:6;221:5 <b>justified (12)</b> 212:5;213:19; 217:15;219:15,19; 220:16;222:5,9;223:4, 8;228:12;231:7 <b>justify (2)</b> 218:17;228:14</p> <p style="text-align: center;"><b>K</b></p> <p><b>Kamen (1)</b> 6:10 <b>Karen (4)</b> 5:1;18:14;172:8,10 <b>keep (3)</b> 117:6;130:6;133:25 <b>keeping (1)</b> 76:13 <b>keeps (2)</b> 114:7;181:19 <b>Kensington (3)</b> 5:1,10,12 <b>kept (2)</b></p>	<p>144:23;178:9 <b>key (1)</b> 230:19 <b>kid (1)</b> 291:11 <b>kind (39)</b> 10:21;12:3;13:16; 16:12;23:5;29:18;65:9; 73:1;104:7;108:19; 116:5;150:23;151:9; 159:23;165:3;167:4; 168:5;170:1,6,21,24; 171:16,23;173:16,17; 175:18;178:20;184:13; 196:18;199:10;225:18; 226:16;237:24;264:4; 268:23;284:3;300:8; 302:4,14 <b>kinds (2)</b> 74:9;163:1 <b>knew (4)</b> 69:4;108:23;109:11; 222:12 <b>knowledge (2)</b> 43:22;251:18 <b>known (3)</b> 4:10;206:13;239:25 <b>knows (2)</b> 70:24;89:3 <b>Krask (14)</b> 156:15;171:23; 174:5,24;175:4,20; 185:24;192:12;194:8, 20;195:9,11;232:14,16</p> <p style="text-align: center;"><b>L</b></p> <p><b>LA (3)</b> 13:10;158:25;302:9 <b>label (1)</b> 147:8 <b>labeled (26)</b> 25:1,4;26:7,8,9,16; 27:4,18;36:12;50:20, 21;91:17;92:18;96:18, 21;128:21;147:4; 149:16;151:6;154:18; 160:19;164:20;166:3, 10,21;186:3 <b>labeling (4)</b> 19:4;48:15;168:1; 184:21 <b>labels (2)</b> 37:6;48:14 <b>lack (1)</b> 265:12 <b>laid (2)</b> 125:12;145:9 <b>land (2)</b> 130:17;280:23 <b>lane (2)</b> 66:13;79:8 <b>language (5)</b></p>	<p>106:6,21;221:9,15; 306:3 <b>large (5)</b> 55:5;137:21;193:1; 237:12;248:11 <b>larger (1)</b> 135:14 <b>Larry (2)</b> 5:5;276:7 <b>Las (2)</b> 13:11;302:9 <b>laser (2)</b> 292:15,17 <b>last (55)</b> 8:4;9:8,23;13:14; 26:1;39:17;56:14; 62:18;64:16;66:18; 84:24;85:1;95:4,24; 105:16;111:23;112:17; 113:4,25;114:13,17; 116:6;146:3;148:25; 149:2;153:9,23; 154:11;155:3,6,11; 157:2,3,5,12;160:6; 161:8;208:3;212:13, 21,22;221:6,7;251:8,9; 260:23;267:19,20; 271:1;279:10;291:25; 292:10,12;298:3;302:8 <b>last-minute (1)</b> 275:8 <b>late (2)</b> 8:11;9:10 <b>later (10)</b> 8:23;14:12;18:12; 19:7;110:12;113:7; 125:3;194:6;225:25; 272:3 <b>laws (1)</b> 275:11 <b>lawyers (1)</b> 304:6 <b>laying (1)</b> 184:13 <b>lead (2)</b> 211:3;254:9 <b>least (13)</b> 42:16;57:12;66:20; 78:17;135:7;157:8; 181:4;182:17,22; 191:7,18;262:2;265:7 <b>leave (3)</b> 81:2;256:23;292:17 <b>leaving (1)</b> 79:21 <b>lecture (1)</b> 164:7 <b>leeway (2)</b> 121:20;242:21 <b>left (8)</b> 46:8,11;175:7; 230:16;295:8,11,13,23 <b>left-hand (3)</b></p>
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<p>37:18;38:4;45:24  <b>legal (1)</b>                  144:11  <b>legislative (2)</b>                  10:21;11:24  <b>lengths (2)</b>                  67:13,15  <b>Lenner (2)</b>                  298:16,25  <b>less (20)</b>                  8:7,8;15:4;58:16;                  79:24;80:2;84:3;99:3;                  100:19;117:10;140:22;                  156:10;166:25;173:12;                  181:20,20,20;188:5;                  196:13;288:25  <b>level (14)</b>                  66:14,16;67:2;78:3,                  5;108:4,5;139:12;                  220:19,22;229:9;                  240:10;244:4;305:2  <b>levels (8)</b>                  69:24;89:16;96:2;                  115:22;160:7;219:23;                  258:16;302:5  <b>lieu (2)</b>                  182:23;185:2  <b>light (4)</b>                  67:23;69:3,4,19  <b>light-duty (9)</b>                  85:12,18,22;86:1,16,                  19,21,23;87:2  <b>lighting (1)</b>                  68:7  <b>lights (1)</b>                  68:8  <b>likelihood (1)</b>                  301:2  <b>likely (4)</b>                  55:7;156:24;211:23;                  295:21  <b>limit (4)</b>                  33:2,4;136:19;                  271:15  <b>limitations (3)</b>                  308:13;309:1;310:19  <b>limited (3)</b>                  156:13;259:1;289:24  <b>limiting (13)</b>                  128:18;203:21;                  208:3,9;211:6;218:6;                  229:12;236:5;250:16;                  251:24;252:4;266:15;                  301:11  <b>limits (3)</b>                  160:8;261:3;304:15  <b>Lindquist (2)</b>                  298:17,25  <b>line (28)</b>                  32:20;71:18;72:20;                  74:5;77:25;78:12;                  114:24;154:11;156:24;                  167:9,18,23;168:7;</p>	<p>183:3,9,12;184:3;                  186:24;248:8;261:21,                  25;263:2,17,19,19;                  264:9;300:14;302:1  <b>lined (2)</b>                  67:11;71:13  <b>lines (6)</b>                  70:8;72:20;114:23;                  293:25;300:10;304:3  <b>link (1)</b>                  277:4  <b>linking (1)</b>                  76:24  <b>list (12)</b>                  6:20;7:10,15;13:4,                  20;19:14;24:3;88:17,                  19,23;89:24;245:11  <b>listed (13)</b>                  23:24;24:1;37:13;                  49:15;50:13,23;                  132:18;167:21;168:7,                  11,15;245:8;300:6  <b>lists (1)</b>                  245:13  <b>literal (1)</b>                  103:23  <b>literature (8)</b>                  241:9,21,24;242:25;                  285:12;287:6;288:12,                  17  <b>litigate (1)</b>                  10:3  <b>litttle (23)</b>                  21:25;23:22;44:2;                  45:11,11;69:25;104:8;                  133:5;160:14;165:16;                  185:9;202:24;217:18;                  218:9;267:6;270:14,                  17;271:24;272:17;                  274:3;294:16;298:8;                  301:21  <b>live (1)</b>                  196:22  <b>loading (39)</b>                  83:21;85:2,12,13,18;                  86:1,5,12,17;116:2;                  135:18;137:18,19;                  237:8;238:18,20,22;                  239:20;240:14;248:7;                  252:8,11,16;286:25;                  287:8,24;288:18;                  289:12;295:2;296:6,                  12,18,19,21;297:1,7,8,                  20,23  <b>located (15)</b>                  4:8;26:24;83:14;                  119:23;123:13,14;                  128:23;130:14;132:2;                  133:2,13;137:17;                  158:3;293:7;296:21  <b>location (17)</b>                  102:25;107:15;                  122:12;124:1;130:15,</p>	<p>15,21;131:18;143:8;                  145:3;162:4;173:25;                  198:15;201:23;236:10;                  255:15;295:18  <b>locations (4)</b>                  123:23;158:4,16;                  297:19  <b>locked (1)</b>                  140:25  <b>long (25)</b>                  13:4;52:9;67:10;                  70:8;72:20;88:6;95:3;                  142:5;173:22;212:2;                  213:15;219:7,12;                  221:25;222:1;228:10;                  229:6;231:5;241:13;                  244:6;259:10;268:5,                  16;273:12;297:18  <b>longer (12)</b>                  9:1;56:24;57:1,6;                  76:19;83:9;137:9;                  201:25;211:16;219:5;                  221:4;228:9  <b>long-term (3)</b>                  272:14;301:17;                  306:21  <b>look (91)</b>                  13:17,17,19;18:25;                  21:25;22:24;36:8;                  41:21,22;45:17;49:5,                  18;66:9;68:16,16,17;                  71:21,22;73:24,25;                  74:1,1;77:5,10;96:19;                  109:21;110:3;111:6,6,                  16;112:6;120:5;127:6,                  24;131:4;137:18;                  142:20;152:13;153:23;                  156:22;158:14;159:10;                  160:13,18;161:7,11;                  162:6,6,8,17;165:24;                  166:3;167:20;175:10,                  12;180:17;183:2,6;                  188:18,23;196:10;                  200:21;202:5;213:6,                  17,21;214:3,9;216:23;                  218:25;225:21;227:25;                  240:15,18;246:2;                  257:1;261:12,15;                  264:2;265:16;279:15,                  22,25;281:10;289:15,                  15;290:17,24;293:16;                  295:7,23  <b>looked (21)</b>                  13:15;37:20;76:4;                  111:24;123:14;125:25;                  126:9,23,25;130:19;                  133:13;140:8;157:5;                  159:6;160:12;178:15;                  229:2;245:12;280:17;                  293:19;309:9  <b>looking (60)</b>                  48:17,19;49:12;                  57:16;63:13;69:22;</p>	<p>78:4;79:24;80:4;81:12;                  115:12;116:4;123:23;                  124:14;126:8,22;                  127:6,10,15,17;128:1,                  15;130:20;132:24;                  139:20,25;151:5;                  160:23,24;162:9;                  173:6;183:5;184:3;                  187:21,23;209:21;                  212:8;217:9;218:9;                  236:20,22;245:20;                  246:6,7;248:16;                  249:18;261:22;265:6;                  278:3;279:20;281:4;                  290:13;291:20;292:20;                  293:2;294:3,4;295:12;                  302:7;303:1  <b>looks (4)</b>                  15:5;97:18;151:14;                  248:6  <b>Loop (3)</b>                  36:13,15;37:1  <b>Los (3)</b>                  158:5,5,23  <b>losses (1)</b>                  20:3  <b>Lot (32)</b>                  4:9;8:9;29:11;35:2;                  55:15;66:21;67:5;                  76:24;77:21;78:18;                  79:5,8,13,14,25;                  111:18;112:22;115:22,                  25;121:20;158:18;                  159:1;166:17;191:22;                  196:5;227:13;255:8;                  270:12;280:24;289:17;                  298:9;311:2  <b>lots (3)</b>                  79:22;80:11;261:18  <b>love (1)</b>                  30:1  <b>low (14)</b>                  125:25;127:7;                  131:22;166:16;167:3;                  190:18,19;197:10;                  240:16;243:19;252:1,                  2,5;301:4  <b>lower (16)</b>                  50:2,18;131:10,14,                  21;158:6,11;159:1;                  190:12,14;197:3;                  248:9;295:8,11,13,23  <b>lowest (2)</b>                  131:6;132:5  <b>lunch (2)</b>                  202:9;203:3  <b>luncheon (1)</b>                  203:4  <b>luxury (1)</b>                  309:16</p>	<p><b>magic (1)</b>                  29:25  <b>magnitude (1)</b>                  306:2  <b>main (7)</b>                  67:12,16;68:5,11;                  73:7;173:20;237:19  <b>maintain (5)</b>                  98:22;99:23;101:20;                  102:6;141:2  <b>major (5)</b>                  16:4;128:6;130:23,                  24;158:7  <b>makes (7)</b>                  182:8;199:16;                  237:15;248:11;252:21;                  257:10;305:1  <b>making (4)</b>                  60:6;134:2;146:5;                  285:10  <b>malfunction (3)</b>                  104:2;165:22;178:21  <b>malfunctions (1)</b>                  166:17  <b>Mall (36)</b>                  4:10;24:15;28:25;                  29:2,5;36:12,15;37:1;                  40:13;56:16,17;68:12,                  24;70:1,5;72:7;77:24;                  86:20;136:7,14,21;                  137:22,24;139:19;                  140:17;254:4,9;255:5,                  7,8,11;256:18;257:13;                  258:18;289:9;293:14  <b>manageable (1)</b>                  136:20  <b>manipulation (1)</b>                  151:15  <b>many (20)</b>                  40:7;85:2;100:16;                  117:15;118:2;173:13;                  196:18,22;199:13;                  200:14;217:6;241:16;                  244:7;259:11;260:13;                  272:11;286:10,10;                  294:10;298:3  <b>map (5)</b>                  123:14;132:24;                  133:24;158:14;293:18  <b>March (11)</b>                  209:6;215:22,22;                  223:25;233:3,4;242:4;                  249:8,25;280:20;284:1  <b>margin (1)</b>                  115:25  <b>marginally (1)</b>                  197:5  <b>mark (4)</b>                  89:19;90:20,23;                  292:17  <b>marked (15)</b>                  36:9;88:24;91:13;                  92:21;94:7,23;95:20;</p>
			<b>M</b>	

<p>148:6,16;149:6;                  150:10;172:5;209:15;                  290:25;295:3  <b>markedly (1)</b>                  197:19  <b>markup (1)</b>                  5:22  <b>Martin (1)</b>                  4:16  <b>Maryland (11)</b>                  4:9;11:4;169:15;                  171:19;207:19,23,24;                  208:1;215:12;227:3;                  309:10  <b>mass (1)</b>                  174:25  <b>match (6)</b>                  151:19;175:7;190:2,                  4;282:5;300:21  <b>matched (4)</b>                  108:25;110:16;                  114:21;203:25  <b>matching (3)</b>                  108:20;109:19,20  <b>material (2)</b>                  8:13;237:22  <b>materials (2)</b>                  8:16;49:1  <b>math (6)</b>                  66:4;153:11,12;                  156:6;178:13;197:16  <b>matter (16)</b>                  4:3;10:11;74:11;                  119:3;142:3,4;175:24;                  185:17;189:23;216:15;                  217:6;226:16;228:16;                  234:22;283:24;284:16  <b>matters (4)</b>                  5:21;7:13;17:1;                  275:25  <b>max (3)</b>                  202:3;295:19;298:24  <b>maximum (12)</b>                  104:8;105:23;106:3,                  9;107:22;108:4,6;                  111:7;116:12;196:16;                  296:2,6  <b>May (43)</b>                  4:13;5:21;6:3,5,6,10;                  8:23;14:3;25:15;28:6;                  52:25;64:10;78:6;                  122:13;148:11;152:12;                  167:6;175:12;189:11;                  190:3,17;195:10;                  202:12;203:11;213:2;                  218:4,12;224:23;                  229:10,12;230:19;                  231:24;239:18;240:18;                  241:13;242:3;259:8;                  271:18;274:4;276:17,                  24;278:13;280:9  <b>maybe (17)</b>                  62:15;71:17;74:14,</p>	<p>16,16;124:20;144:13;                  166:12;202:1;240:9;                  266:22;267:23;272:12,                  19;274:21;279:24;                  308:1  <b>MDE (5)</b>                  98:20;99:3,21;                  100:15;102:5  <b>MDE's (1)</b>                  301:25  <b>mean (121)</b>                  6:24;7:14,20;9:16,                  18;10:4;11:13;15:18,                  20;30:23;31:2;38:6;                  41:1;44:6;48:10;49:8,                  15;53:15;55:8,15;57:3,                  8,14;59:23;61:3;62:1,                  11;66:17;68:22;73:23;                  81:16;82:6;95:18;                  102:17,21,24,25;                  103:15;104:10;105:6;                  107:10;109:3;115:1;                  119:20;120:18;127:14;                  131:16,17,24;136:18,                  19;137:25;139:22;                  141:7;144:13;145:21,                  24;153:8;154:6;                  158:17,22;159:7;                  160:9;161:14,15;                  168:13;170:2,10;                  173:3;175:9;176:17;                  177:23;178:22;179:24;                  180:25;181:18;185:10;                  186:6,10;187:11,12;                  188:14;189:13;191:2;                  194:16;195:24;196:2,                  11;200:9,24;211:2;                  234:10;239:12;241:14;                  242:17;243:15;251:20;                  255:13;257:1;258:20;                  261:11;267:25;272:24;                  273:5;274:7;275:22,                  23;280:23;281:25;                  282:25;283:10;286:14;                  288:21;289:24;291:6;                  295:5;304:9;306:6,9;                  307:3;309:4  <b>meaning (2)</b>                  114:2;302:20  <b>means (14)</b>                  4:16;128:16;132:8;                  161:16;163:13;164:18;                  165:15;172:15,16,18,                  19;173:11;231:15;                  286:15  <b>meant (4)</b>                  69:24;130:5;164:24;                  253:7  <b>measure (10)</b>                  79:23;107:3;128:4;                  216:4;256:12,16,22,25;                  257:25;293:15  <b>measured (26)</b></p>	<p>98:13,14;102:16,17,                  20,22;103:3,12,12,14,                  16,23;104:14;105:25;                  122:22;123:1;225:6,                  12;234:21;302:3,13;                  305:18;307:18;310:10;                  311:1,2  <b>measurement (4)</b>                  182:23;189:4;                  298:18;303:11  <b>measurements (3)</b>                  103:20;117:2;293:20  <b>measures (1)</b>                  103:19  <b>meet (4)</b>                  256:13,13;258:16;                  287:3  <b>meeting (4)</b>                  6:13;122:14,16;                  131:18  <b>meetings (2)</b>                  34:15;124:3  <b>memo (30)</b>                  96:1;121:17;142:16;                  144:3,5,9,9,11,12;                  145:5;184:11,14;                  208:16,25;211:13;                  215:16;217:14;221:11,                  12,18,20,21,24;223:18;                  233:2,6;277:14;281:2;                  284:2,3  <b>memorandum (1)</b>                  223:15  <b>memory (1)</b>                  272:14  <b>memos (2)</b>                  210:9;245:8  <b>mention (1)</b>                  140:19  <b>mentioned (24)</b>                  46:5;62:18;77:18;                  109:7;119:8;139:7;                  140:19,22;154:2;                  155:7;156:15;158:5;                  169:24;208:18;233:4;                  238:17;242:6;243:3,                  10;251:25;252:20;                  264:5;300:6,22  <b>mentions (1)</b>                  242:5  <b>met (3)</b>                  215:8;230:4,21  <b>meteorologic (1)</b>                  59:15  <b>meteorological (6)</b>                  179:24;234:4,5,8,11,                  12  <b>meteorologists (1)</b>                  131:17  <b>meteorology (2)</b>                  31:11;76:12  <b>Meter (7)</b>                  91:23;92:20;112:1;</p>	<p>154:25;155:3;197:14;                  301:1  <b>meters (15)</b>                  239:18;241:2;                  243:12,13,16;287:12;                  288:15;290:6,7,8,19;                  293:3,8,13;294:10  <b>method (92)</b>                  100:16;101:16,17,                  18,20;102:12,13;                  114:21;115:5,7;                  140:24;141:6;161:15;                  163:18,23;165:5,10,12,                  20;169:20;175:7,22;                  176:3,5;178:16;179:2;                  180:19;183:3;187:5;                  193:19;194:15;197:20;                  203:21;208:4,4,6,9,10,                  18,20;210:3,10;211:6,                  7,9,10;218:6,7;220:11;                  222:21;227:8,15,19;                  228:8,10;229:10,12,14,                  16,19;230:18;236:5,                  17;237:1;238:2,14;                  239:2;241:8,22,25;                  242:20;245:22;249:13,                  16;250:13,16;251:24;                  252:4;266:15;282:17;                  286:12,13,16;287:16,                  19,20,21;288:3,4,24;                  289:4;301:12  <b>methodology (20)</b>                  116:19,21;178:3;                  203:18,25;216:9;                  217:8;237:16;238:6;                  243:1,17;249:11;                  253:19;265:9;283:2,                  18;285:3,6,6;286:21  <b>methods (20)</b>                  98:22;99:22;102:6;                  116:5;141:15;165:1;                  170:3,7;175:11,22,24;                  179:25;180:1;187:19;                  209:24;235:1,23;                  248:5;263:15,21  <b>metropolitan (11)</b>                  122:23;123:20;                  129:2;130:24,24;                  133:25;135:9;149:22;                  150:4;279:14,23  <b>Michele (1)</b>                  262:18  <b>microgram (3)</b>                  196:5,13;197:4  <b>Micrograms (16)</b>                  91:22;92:19;111:8,                  10;112:1,6;113:5,13;                  154:25;155:3;197:14;                  301:1;303:3,5,6;305:8  <b>midday (1)</b>                  58:15  <b>middle (12)</b>                  89:2;155:11;156:3;</p>	<p>196:12,21,22;201:2,3,                  3;255:1,15;257:19  <b>middle-of-the-road (1)</b>                  129:4  <b>midpoint (3)</b>                  82:2;241:2;243:12  <b>might (15)</b>                  16:21;30:24;74:9;                  88:1;89:18;100:21;                  124:1;127:16;185:8;                  213:2;270:10;275:18;                  309:20;310:1,21  <b>Mike (1)</b>                  4:24  <b>miles (12)</b>                  71:13;78:18,24;79:6,                  10,14,24,25;80:4,11,                  13,15  <b>Mill (2)</b>                  4:8;30:21  <b>mind (2)</b>                  135:22;277:3  <b>mine (5)</b>                  149:17,20;204:24;                  205:14;281:16  <b>minor (2)</b>                  72:1;82:7  <b>minus (7)</b>                  301:18,22;302:19;                  303:14,23;306:24;                  307:12  <b>minuscule (2)</b>                  196:7;197:7  <b>minute (9)</b>                  9:8;26:4;35:12;                  92:15;93:12,13;174:8;                  186:7;263:11  <b>minutes (31)</b>                  7:19;78:19,19;80:18;                  81:2,4,8,14,20,22;                  82:20,24;83:7,10,10,                  11,14,17,18,22;84:3,4,                  6,25,25;202:1,24;                  266:22,22;298:20,23  <b>minutes' (3)</b>                  83:3,3;84:8  <b>Mirant (1)</b>                  239:15  <b>mislead (1)</b>                  156:19  <b>misleading (1)</b>                  179:20  <b>missed (2)</b>                  28:6;291:10  <b>missing (4)</b>                  190:17,17;191:11,22  <b>mistake (1)</b>                  296:18  <b>mix (4)</b>                  84:16,17;85:5;                  237:18  <b>mixed (1)</b>                  161:17</p>
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<p><b>mixing (6)</b>                  237:21;244:4;                  249:14;250:7;253:22;                  286:22</p> <p><b>mobile (3)</b>                  244:15;247:5;250:20</p> <p><b>MOBILE6 (1)</b>                  197:1</p> <p><b>model (122)</b>                  78:10;80:2;99:3;                  101:11;116:6;120:22;                  137:21;162:20;181:8,                  19;184:21;204:7;                  206:3;210:5,6;211:17;                  217:12,19,22;218:4,4,                  10,12,13,18,20,20,21;                  219:5;220:2,14,15,16,                  20;221:5,9;222:16,19,                  24,25;223:4,7;224:23,                  24,25;225:5,8,12,13;                  226:4,7,9,15;227:1;                  228:10;230:12,17,19,                  23,24;231:10,10;232:3,                  24;233:1,10,13;234:6,                  18,18,20,22,24,25;                  235:13,18,20;237:25;                  242:12;244:1;253:3,5;                  255:21;260:10;261:5;                  283:20,20,22,23;284:4,                  7,11,13,19,21;285:6;                  290:18;299:18,18;                  300:15,15,16;301:15,                  16;303:19;305:2,3,7,                  19,19,20,25;306:3,11;                  307:4;309:22;310:7,                  12,23,23;311:4,7</p> <p><b>modeled (31)</b>                  24:13;47:6,14,18,19;                  57:19;60:22;61:9,19;                  63:22;72:4;78:9;99:16,                  19;102:8;106:15;                  108:6;236:9;243:7,10;                  247:6;254:25;282:6;                  292:24;296:20;303:21;                  305:8,21;306:12,15,20</p> <p><b>modeling (144)</b>                  25:11;31:25;32:7;                  34:5;46:13,16;47:1,2,9,                  13,21,22,24;48:11;                  59:5,11;61:8;68:9,17,                  20;69:8;77:5,22;79:4,                  13;80:5,9,9;83:8,12,18;                  84:5,8,9,10,10,12;                  110:1;113:12;115:11,                  14;117:4;130:25;                  135:13;136:8;138:12,                  15;139:8,8,15;140:16;                  143:3;156:11;157:9,                  11;182:16;183:20;                  185:14;201:22;206:5;                  207:2,5;209:2,6;                  211:21;212:4,4;                  213:19;215:7;216:8,</p>	<p>13;217:3;219:14;                  220:25;222:5;224:2;                  225:11;226:3;228:12;                  229:11;231:6;232:5,                  20;235:21,23;236:1,4,                  12,13;237:19,20;                  240:22;243:6;247:16,                  19;252:22;253:12;                  255:16;258:14;259:15;                  261:12;266:6,8,10;                  271:4;279:13,22,23;                  280:13;283:6;284:15;                  285:14;286:25,25;                  287:2;300:7,20,23;                  301:3;302:11,23;                  303:2,4,4,14,19,22;                  304:16,16;305:4,15,16,                  17;306:6,8,15;307:13;                  308:18,20,21,23;309:4,                  14;310:4</p> <p><b>modeling's (1)</b>                  305:4</p> <p><b>models (12)</b>                  183:2;221:17;222:1;                  225:5;226:11;257:16;                  260:15;261:7;285:19;                  286:3;305:24;307:8</p> <p><b>model-to-monitor (1)</b>                  247:14</p> <p><b>modification (2)</b>                  218:2,17</p> <p><b>modifications (2)</b>                  100:15;284:12</p> <p><b>modified (10)</b>                  98:23;99:24;102:7;                  220:20;222:14,21,24,                  25;233:6;298:21</p> <p><b>mole (1)</b>                  286:20</p> <p><b>mole-by-mole (1)</b>                  286:20</p> <p><b>molecular (1)</b>                  244:4</p> <p><b>moment (14)</b>                  32:15;39:4;41:8;                  42:8;45:18;87:20;95:3;                  99:7;164:1;183:14;                  215:25;219:8;299:4;                  311:9</p> <p><b>Monday (12)</b>                  267:15,22,23;                  268:18,19;269:10;                  274:25;275:5,21;                  311:9,16,18</p> <p><b>monitor (91)</b>                  90:25;91:11;93:11;                  94:15,21;107:14;                  113:17;116:17;120:5;                  122:9;124:11,23;                  125:17;130:10,13,14;                  146:14;147:23,24;                  148:14;149:5;150:8,                  15;152:23;156:16;</p>	<p>158:3;160:16;161:8,9;                  162:5,23;164:18,24;                  165:15;167:13,16,24;                  168:12,14;169:1,12,17;                  170:22;171:2,3,23;                  173:9,10;174:25,25;                  175:1,18,18,25;176:1,                  12;177:15;178:10,23;                  179:22;180:13;181:17;                  182:14;183:9,10,13;                  184:2,2,6,22,25;                  185:12,16;186:3;                  187:9,11,11;188:2,12;                  189:18;192:13,14,15,                  17;194:10;195:17,17,                  18,21;197:13;200:10</p> <p><b>monitored (3)</b>                  179:18;196:10;                  303:11</p> <p><b>monitoring (11)</b>                  155:7;169:20;                  173:24;178:15;179:12;                  189:2;193:22;198:16;                  201:17;232:16;300:21</p> <p><b>Monitors (70)</b>                  91:24;92:8;93:14;                  94:5;107:7;118:24;                  119:11;121:18;122:7,                  18;123:13;124:12;                  125:22;128:21,24;                  130:9;138:21;142:15;                  155:15;156:10,14;                  160:14;163:1;164:20;                  168:2,5,14,23;169:25;                  170:1,6,7,11,15,24;                  171:16,19;173:16,17,                  21,22;175:6,7;176:9,                  14,18;179:9;180:19;                  182:16,24;183:7,9;                  184:7,19;185:1,3,4,13;                  186:1;187:14;191:1,1,                  22;192:1;194:1;                  195:19;197:19;198:6;                  201:13;310:16</p> <p><b>Monte (5)</b>                  74:7,10,15,17,18</p> <p><b>Montgomery (19)</b>                  11:4;98:14;103:12;                  104:14;105:25;106:18;                  107:1,5,6,11,16,20;                  114:15;118:18,23;                  119:4,9,13;123:2</p> <p><b>months (3)</b>                  15:14,21;144:13</p> <p><b>moot (1)</b>                  200:17</p> <p><b>more (86)</b>                  8:24;10:21;13:1,8;                  15:7;25:14;31:10;                  54:13,15;58:19;59:15,                  16;60:11;65:19,21,23,                  24;72:3;76:15;77:1,2;                  78:18;81:22;83:22;</p>	<p>84:3,6,12,20;85:21;                  93:6;94:22;104:7;                  108:10;109:24;110:25;                  113:10;115:25;119:24;                  124:14;131:24;136:20;                  140:19;152:16;155:18;                  156:7;158:18;166:20;                  176:13;180:1,17;                  191:25;196:3;213:9;                  215:15;216:20;223:6;                  227:20;233:3;243:3,                  13;248:10,11;252:5,                  10;263:6;265:19;                  267:10;268:11;275:9,                  11,11,13;278:13;285:1,                  1,288;18,21,24;289:1,                  2;298:9;302:6;307:15;                  308:3,11;311:10</p> <p><b>morning (15)</b>                  4:20,22;5:6,8,9;18:9;                  24:10;34:24;37:7;                  41:18,20;60:9;76:25;                  77:4;311:16</p> <p><b>most (41)</b>                  28:1,9;55:7;72:16;                  74:15;79:17;81:11;                  82:12;84:11;85:8,8;                  98:15;100:16;102:8,                  11,13;116:21;117:5,8;                  130:20,22;131:18;                  135:23;144:9;145:2,3;                  156:23;191:19;211:23;                  216:8;247:8;250:6;                  259:17;260:10;261:6;                  284:19;287:1,13;                  288:20;295:21;303:2</p> <p><b>mostly (3)</b>                  81:5;132:5;280:25</p> <p><b>motion (1)</b>                  271:20</p> <p><b>motives (1)</b>                  182:1</p> <p><b>motor (1)</b>                  243:11</p> <p><b>move (19)</b>                  9:3;42:25;43:1;                  89:15;107:24;117:22;                  118:7,13,15;121:6,7;                  129:18;136:6;138:4;                  159:20;197:22;243:4;                  261:19;272:22</p> <p><b>moved (8)</b>                  58:25;106:25;107:5;                  120:3;134:20;136:2,5;                  142:24</p> <p><b>Movement (2)</b>                  36:14,17</p> <p><b>movements (1)</b>                  37:17</p> <p><b>MOVES (1)</b>                  197:1</p> <p><b>movie (1)</b>                  291:1</p>	<p><b>Moving (4)</b>                  36:25;67:7;78:17;                  298:10</p> <p><b>Mrs (1)</b>                  52:24</p> <p><b>much (44)</b>                  8:10;46:21;55:3;                  56:25;58:19;59:15,16;                  60:11;63:4;71:19;                  76:15;77:1;78:10;                  84:20;87:16;106:5;                  111:24;119:24;126:9;                  129:3;140:16;144:3;                  152:13;158:19;161:11;                  163:13;180:1;186:10;                  188:9;190:18;197:3,7,                  9;199:23;201:25;                  202:20;248:6,6;                  269:24;276:4;287:5;                  288:20;302:6;307:12</p> <p><b>multiplied (2)</b>                  154:24;155:2</p> <p><b>multitier (1)</b>                  206:17</p> <p><b>must (2)</b>                  220:16;272:14</p> <p><b>Myself (1)</b>                  34:11</p> <p><b>mystery (2)</b>                  274:5;275:9</p> <hr/> <p style="text-align: center;"><b>N</b></p> <hr/> <p><b>NAAQS (10)</b>                  135:10;160:8;216:5,                  24;247:8;254:5,16;                  255:6,14;258:8</p> <p><b>name (3)</b>                  4:15;147:10;298:14</p> <p><b>names (1)</b>                  270:8</p> <p><b>National (11)</b>                  105:17;193:21;                  209:3;224:2;234:11,                  15;256:14;257:24;                  258:16;265:1;266:4</p> <p><b>nature (1)</b>                  234:7</p> <p><b>nauseam (1)</b>                  29:15</p> <p><b>near (9)</b>                  79:12;157:21;160:7;                  187:17;244:6,6;287:2;                  296:5,6</p> <p><b>Nearby (9)</b>                  91:24;92:8;93:14;                  94:1;130:25;156:16;                  158:15,17;288:20</p> <p><b>nearest (1)</b>                  294:22</p> <p><b>near-road (2)</b>                  155:15;156:14</p> <p><b>necessarily (10)</b></p>
--	---	---	---	---



<p>108:5;152:20,25;                  183:1,3,12;184:3;                  186:4,6;264:17  <b>necessary (9)</b>                  98:15;103:13;                  115:13;118:21,23;                  198:25;232:23;233:23;                  295:4  <b>need (23)</b>                  7:22,25;36:3;49:5;                  52:21;117:9;139:13;                  152:16;155:15;180:8;                  186:11;207:16;241:15;                  254:5,10,11,12,14;                  265:13;276:17;277:7,                  22;302:1  <b>needed (3)</b>                  97:20;272:7;291:7  <b>needs (8)</b>                  158:18;182:17;                  216:23;227:10;256:5;                  260:12;286:21,22  <b>neighborhood (3)</b>                  137:2;269:22,25  <b>Neither (3)</b>                  208:9,9;210:22  <b>network (2)</b>                  246:22;279:14  <b>networks (1)</b>                  242:6  <b>nevertheless (1)</b>                  185:2  <b>new (18)</b>                  6:2;19:8;89:19;                  95:12;98:23;99:23;                  102:7;109:4;155:12,                  12;156:14;157:4;                  172:10,12;203:17;                  276:18;285:6,6  <b>newer (3)</b>                  214:21;215:3,3  <b>news (1)</b>                  7:5  <b>newspaper (1)</b>                  13:9  <b>next (28)</b>                  4:13;7:10;14:25;                  22:1;42:25;93:6,10;                  99:20;117:22;147:10;                  158:7,11,20;159:4;                  160:3;181:9;182:19;                  187:16;189:12;211:12;                  237:11;267:7;272:22,                  22;275:14,18;283:12;                  302:10  <b>night (9)</b>                  76:25;111:23,23;                  112:17;113:4,25;                  146:3;157:2,5  <b>nights (1)</b>                  52:25  <b>Nitrogen (1)</b>                  276:15</p>	<p><b>NO2 (77)</b>                  91:16,17,21,23;92:5,                  7,14,18;93:13;94:1;                  103:19;107:6;110:1,5;                  112:2;113:12;115:14,                  19;124:11;125:19,25;                  126:8,24,25;127:16;                  128:2,18;137:3,6,11;                  142:15;147:10;148:8;                  149:5,10,12,16;150:8;                  153:24;160:10;170:16;                  204:4,8,16;205:20,25;                  206:16;209:3,7;                  219:12;224:2;225:24;                  231:4;236:13;241:15,                  16;242:15;247:5,8;                  250:11;276:15,21;                  280:14;281:13,23;                  282:1;285:11;286:17,                  20;287:9;289:18;                  297:2,11;298:9;302:3,                  11;309:7  <b>nobody (2)</b>                  30:9;231:2  <b>nobody's (1)</b>                  74:21  <b>noise (3)</b>                  309:23;310:25;311:3  <b>non-attainment (1)</b>                  276:22  <b>none (1)</b>                  62:12  <b>non-environmental (1)</b>                  269:3  <b>nonetheless (1)</b>                  217:14  <b>non-inherent (2)</b>                  11:13,16  <b>non-OLM (1)</b>                  285:15  <b>non-peak (1)</b>                  78:2  <b>non-peer-reviewed (1)</b>                  7:6  <b>non-preferred (1)</b>                  221:17  <b>non-reference (1)</b>                  178:23  <b>non-regulatory (13)</b>                  208:19;209:25;                  211:13;212:3;217:15;                  219:1,13;221:3;222:2;                  228:8,11;231:5;232:18  <b>noon (1)</b>                  30:24  <b>noontime (2)</b>                  56:19;58:15  <b>nor (3)</b>                  119:10;122:21;                  208:10  <b>normal (1)</b>                  167:1  <b>normally (2)</b></p>	<p>156:9;157:7  <b>north (3)</b>                  38:8;137:20;294:16  <b>Northeast (4)</b>                  132:23;167:18;                  168:11;183:7  <b>Northwest (1)</b>                  168:19  <b>note (6)</b>                  8:6;9:4;15:11,13;                  18:7;182:25  <b>notes (1)</b>                  67:5  <b>notice (2)</b>                  167:17;276:13  <b>noticed (2)</b>                  9:25;159:3  <b>November (17)</b>                  18:22;19:11;20:6;                  22:1;31:25;47:13;                  104:16,19,21;105:11,                  12,14;108:23;176:23;                  178:14;257:10,21  <b>nowhere (3)</b>                  62:6;187:17;287:2  <b>NOx (14)</b>                  57:19;61:8;137:8;                  140:23;204:7,16;                  205:19,25;236:12;                  282:1;285:11;297:2,                  11;298:10  <b>number (112)</b>                  18:24;19:6,9,10,14;                  23:20,20;26:23;30:17;                  37:9,12;38:3,4,4,5,9,                  16,22;39:9;40:10,10,                  12;41:11,25;42:1;                  44:20;51:1;52:16;53:8,                  22,24;54:19;56:6;                  57:18;61:20,24;62:1,6,                  6,9,13,17,24;64:20;                  65:22;74:5;76:14;85:3;                  94:14;95:13;96:10;                  102:22;106:18;107:1,                  3,23;108:15,25;                  109:22;111:8,9,14;                  112:9,18,19,23,24,25;                  113:2;126:25;127:7,                  17;132:2,5,15,15;                  143:5,15;144:23;                  154:24;155:2,20;                  156:12;161:4,7;163:9;                  166:6;167:1,15;                  168:14;176:7,25;                  177:13;178:9;183:1;                  190:13,14;192:12,13;                  196:23;197:13;198:16;                  232:3;236:10;244:19;                  262:22,23;288:20;                  292:8;303:25;305:9;                  307:7  <b>numbered (1)</b>                  15:4</p>	<p><b>numbering (1)</b>                  45:2  <b>numbers (139)</b>                  15:23,25;16:8,9;                  20:4,15,25;22:12,14,                  17,19,22;23:10,16,17;                  24:6,7;25:5,21;32:13,                  16;34:10,23;35:3;                  37:11,21;38:11,14;                  39:16,18,23;40:4;42:4,                  9,10,12;43:3,7,15;44:9,                  11,25;45:3,4,21;46:1,4,                  6,17,25;47:5,18;48:5,9,                  12,16,20,23;49:7,9,14,                  20;50:2,3,11,13,21,23;                  51:12,13,14,25,25;                  52:2,10,20;53:1,11,20;                  54:11,23;55:8,10,12,                  12;61:25;62:12;63:2;                  64:4,4;65:1,6,9;77:2;                  91:3;126:24,24;128:2;                  131:19;132:11,13,14;                  140:9,15;143:20;                  144:5,19;145:11,12,18;                  146:6;148:21;150:22;                  151:16,18,19,20;152:2,                  25;153:9,13,14,24;                  154:15;163:16,20;                  180:13;187:22;189:10;                  192:15;195:23;196:19;                  199:25;200:12,17;                  241:4;244:12;264:8;                  288:11  <b>numerous (3)</b>                  43:18;118:20;122:25</p>	<p><b>obligations (1)</b>                  8:15  <b>OBS (1)</b>                  166:4  <b>observation (1)</b>                  12:21  <b>observations (12)</b>                  52:14;64:14,21,22;                  163:10;166:4;167:21;                  168:16,18;187:21;                  192:24;199:5  <b>observed (2)</b>                  48:6;63:2  <b>obtuse (1)</b>                  250:23  <b>Obviously (11)</b>                  9:21,24;12:6;16:5;                  54:22;108:23,24;                  119:3;177:23;189:20;                  287:25  <b>occasion (2)</b>                  73:22;241:11  <b>occasions (1)</b>                  118:20  <b>occur (6)</b>                  59:14;84:20;167:4;                  182:1;227:5;286:22  <b>occurred (2)</b>                  108:22;178:19  <b>occurs (8)</b>                  28:13;56:19,20;                  58:14;116:12;247:3;                  249:14;250:11  <b>o'clock (5)</b>                  77:4;111:23;145:21;                  307:6;308:1  <b>October (2)</b>                  155:11;156:4  <b>odds (1)</b>                  79:13  <b>off (21)</b>                  14:23;35:17;95:10;                  105:11,16;122:6;                  123:16;145:24;164:13;                  168:7;177:8;189:11;                  215:20;239:7;240:16;                  246:7;281:12;286:8;                  294:23;304:10;307:19  <b>offered (1)</b>                  139:8  <b>office (6)</b>                  207:21;211:18;                  217:12;219:6;221:6;                  235:12  <b>offices (1)</b>                  260:13  <b>official (1)</b>                  11:3  <b>offline (1)</b>                  248:25  <b>often (7)</b>                  45:8;74:20;83:21;                  86:4;104:6;188:13;</p>
--	--	--	--	--

**O**

<p>243:13  <b>oftentimes (2)</b>                  70:9;72:20  <b>OLM (86)</b>                  115:16;140:24;                  141:6;208:17;209:24;                  210:17,22,23;211:1,3,                  15;212:2;218:6,16;                  219:4,11;220:11;                  221:3,16,25;222:8,21;                  223:4;227:8,15,18;                  228:8,10;229:14,19;                  230:13,17;231:2;                  233:15;236:5,14,17;                  237:1,23;238:2,14;                  239:2;241:7,22,25;                  242:15;243:6;244:2,3,                  9;245:3,22;246:25;                  247:1,4,15;248:5,9,10;                  249:6;250:5,8;253:20;                  279:24;282:17;284:12;                  285:2,4,9;286:12,12,                  15,15,21;287:3,16,19,                  20,20,21;288:3,9,21,                  24;289:4;297:5  <b>OLMF (1)</b>                  239:2  <b>OLMGROUP (6)</b>                  247:4,16,20;248:3,6,                  8  <b>omitting (1)</b>                  58:13  <b>once (13)</b>                  8:23;84:8;100:5;                  101:7;127:23;133:23;                  139:14;165:16,16,21;                  166:12;172:20;252:22  <b>one (206)</b>                  6:13;13:10,20;16:3,                  4;23:22;25:4,14,21;                  26:7,8,9;27:2,4,30;14,                  16;37:17;41:21;45:18;                  49:9;53:21;57:23;                  58:13;59:17;60:16;                  61:24;62:1;67:22,25;                  68:22;71:2,18;81:24,                  24,25;84:7,20;85:23;                  88:18;89:10;90:11,24;                  91:15,21,23;92:7;93:1,                  6,10;94:9,22;95:7,7;                  97:18;101:4,17,18;                  103:24;104:20;106:5,                  13;107:23;108:2,14;                  121:6;123:17,18;                  124:1,13,20;125:18;                  132:15,22;133:9;                  140:18,19;141:15;                  142:21;144:1,1;                  146:21,22,22,25;                  147:15,17;148:9,25;                  149:11,12,15;150:25;                  155:10,14;156:16,16;                  157:16,17;160:5,18;</p>	<p>165:5;166:10,20;                  167:15,18;168:11;                  169:22;172:12;173:23,                  25;174:1;178:16,24;                  179:1,3;184:9;187:17,                  23,24;188:2,8,9,10;                  189:11,25;190:1;                  191:7,7,8,8,8,12,16,17,                  17,20;192:21;196:3;                  197:19;198:2,3,8,10,                  21,22;199:13,13;200:1,                  10;204:19;205:9,10;                  206:15;209:10;210:21,                  22;213:3;214:25;                  219:23;224:14,15;                  226:9,11;227:7;                  230:16;232:3;233:3;                  234:15;237:16;239:1,                  9,24;241:13;242:2,3;                  243:3;248:14;249:4;                  22,22,23,23;251:22;                  252:3;253:20;264:6;                  267:3;276:3;277:14;                  280:15,16;285:20;                  286:20;288:19;290:9,                  9,19;292:1,4;295:8,9,                  10;307:19;308:3,11;                  310:6  <b>one-and-a-half-meter (1)</b>                  243:11  <b>one-hour (21)</b>                  20:19;76:20,21;78:4;                  85:20;110:5;112:2;                  116:12;148:15,22;                  149:5;150:9;209:3,7;                  219:12;224:2;231:4;                  236:13;241:15;281:13,                  20  <b>one-page (2)</b>                  91:10,16  <b>one-quarter (1)</b>                  155:23  <b>ones (21)</b>                  19:1;23:17;25:25;                  26:2;29:2,4;51:21;                  52:4,5;61:25;62:25;                  69:19,20;74:7;151:5,                  23;156:16;164:19;                  187:18,22;191:17  <b>online (4)</b>                  245:18,18,20;246:1  <b>only (38)</b>                  10:11;11:8;15:22;                  16:1;26:2;29:2;37:17;                  47:9,19;48:16;50:5;                  83:6;84:16;85:11;95:6;                  110:15;111:3;123:18;                  125:16;148:25;149:12;                  150:23;155:11,16;                  156:16;157:4;170:1;                  176:25;183:20;187:24;                  188:11;189:20;252:15;                  289:8;290:11,12;</p>	<p>298:23;304:16  <b>on-paper (1)</b>                  100:17  <b>onto (3)</b>                  54:5;250:21;260:3  <b>open (7)</b>                  24:16;28:3,5;30:18;                  55:15;61:12;98:5  <b>opened (4)</b>                  53:14,21;55:25;70:5  <b>operate (1)</b>                  4:6  <b>operating (3)</b>                  22:14;164:24;166:17  <b>operation (1)</b>                  22:13  <b>operations (1)</b>                  72:2  <b>opinion (13)</b>                  86:7;112:10;128:9;                  141:16;179:11,13;                  190:24;196:15;197:8;                  215:2,6;246:19;259:14  <b>opportunity (7)</b>                  6:20;34:4;89:8;                  111:16;145:18;146:10;                  232:23  <b>opposed (9)</b>                  8:22;32:2;53:4;                  124:19;155:24;184:5;                  192:8;200:7;243:6  <b>opposition (9)</b>                  6:1,18;89:7;109:6;                  139:23;140:4;262:4;                  267:4;304:6  <b>option (13)</b>                  211:16;218:1;219:4;                  226:15;227:3;228:11;                  233:2,4;242:14,15;                  247:4;248:9;284:12  <b>options (19)</b>                  208:9,13,19;209:25;                  212:2,3;217:15;                  219:11,13;221:4,25;                  222:2;231:2,6;246:22,                  24;283:21;284:21;                  286:4  <b>oranges (2)</b>                  226:16,17  <b>order (12)</b>                  8:13;79:23;90:22;                  108:9;111:9;148:12;                  238:13;240:21;256:5;                  265:12;287:12;294:11  <b>Ordinance (1)</b>                  4:5  <b>organic (1)</b>                  262:15  <b>orientation (1)</b>                  158:16  <b>original (7)</b>                  14:4;15:20;22:3,5;                  43:14;120:17,18</p>	<p><b>originally (5)</b>                  138:20;151:1,1;                  161:4;182:6  <b>others (2)</b>                  156:13;229:20  <b>otherwise (5)</b>                  236:19;237:5;238:4;                  259:2;302:2  <b>out (86)</b>                  7:10;10:3;24:25;                  39:18,20;46:8;48:7,14;                  49:13;51:22;59:13;                  61:25;64:2;67:12,16;                  68:5,11;72:21;74:21,                  22;77:8;80:25;88:17;                  90:4;93:20;95:5;96:14,                  24;108:3;111:14,23;                  116:17;118:2,7;                  125:12;126:9;133:8;                  136:8;137:5,9;144:4;                  145:6,9;156:5;166:13;                  169:1;170:4;175:7;                  178:11;179:3;180:5;                  182:11;183:3,12;                  184:3,13;185:7;186:2;                  188:8;189:19;194:6;                  200:22;201:4;205:7;                  212:20,22,23;214:16,                  20;220:22;221:2;                  222:22;227:14;230:16;                  239:24;242:17;253:13;                  261:10,13;275:14,18;                  276:19;297:14,14,16;                  302:17  <b>outlier (3)</b>                  174:1,4;185:15  <b>outliers (1)</b>                  173:25  <b>outlined (1)</b>                  233:25  <b>outlines (1)</b>                  281:9  <b>outset (1)</b>                  15:11  <b>outside (12)</b>                  28:20,21,25;29:2;                  32:4,22;72:7;107:16;                  232:25;237:22;253:23;                  297:4  <b>outskirts (1)</b>                  122:12  <b>over (56)</b>                  42:15,15,15;44:14;                  45:10;53:23;55:20;                  56:24;63:25;65:23;                  66:11;70:15;89:8;93:3;                  96:2;101:4;102:22;                  104:8;105:25;111:24;                  115:23;117:12,14,14,                  14,15,18,18,23,23,25,                  25;121:14;130:7,7;                  134:1,1,1,5,6;145:22;                  159:13;178:17;180:8;</p>	<p>186:13;189:6;190:8,                  11;197:15;231:17,25;                  261:18;265:22;295:2;                  307:8;308:11  <b>overall (15)</b>                  22:15;53:24;54:8;                  56:15,24;57:6;60:11;                  74:3;84:6;86:8,10;                  128:7;190:5;290:25;                  292:20  <b>overarching (3)</b>                  216:10,12;261:16  <b>overrule (1)</b>                  158:1  <b>overseeing (1)</b>                  207:25  <b>overstated (3)</b>                  288:12;302:12;                  307:17  <b>overstatement (1)</b>                  84:22  <b>overstating (2)</b>                  84:19;298:8  <b>overview (1)</b>                  203:19  <b>own (16)</b>                  6:25;16:12;18:11;                  63:1;64:11;118:3;                  138:10,15;141:16;                  162:6;168:1;202:19;                  232:25;272:17,17;                  299:7  <b>OZAH (5)</b>                  4:4;18:23;22:6;                  39:13;66:10  <b>ozone (19)</b>                  203:21;208:3,9;                  211:6;218:6;229:12;                  236:5;237:18,22;                  248:6;249:14;250:15;                  251:24;252:3;253:23;                  266:15;286:20;288:22;                  301:11  <hr/> <p style="text-align: center;"><b>P</b></p> <hr/> <b>package (5)</b>                  49:8;78:14;145:13;                  157:6;220:25  <b>packet (1)</b>                  6:13  <b>page (128)</b>                  15:4;20:21;22:1,1,                  24;26:1,7,10,10,12,22;                  27:3,6,17,19;36:1,2,8,                  19,23;37:18;62:3;                  92:17,18;93:7;94:22;                  95:7;96:4,19;97:12,13,                  16,19;98:20,24;99:14;                  103:5,7;104:20,21;                  106:5;107:24;108:9;                  114:19,24,25;116:25;                  117:1;147:10;149:14;</p>
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<p>153:9,13,23;161:9;                  162:11;163:16;168:8;                  169:14;172:24;173:2,                  4,6;188:8,10,18,24;                  189:1;193:8,9,19;                  204:17,22,24;205:14,                  14;208:22,23;209:18,                  21;211:12;212:9,10;                  213:17;217:10;222:7;                  225:21,23;229:5;                  236:16,23,25;239:3;                  242:10;244:12,13,14,                  18,24;247:2,10,13;                  249:19,19;250:19,21,                  21,25;251:4,10;260:8;                  261:25;262:17,22,23,                  24;263:2;264:9;281:9,                  11,11,14,17;282:10;                  284:7,23;299:14,15;                  305:23</p> <p><b>pages (19)</b>                  15:24;18:24;35:20;                  91:18;96:6;97:21,24;                  98:3,4;104:20;105:13;                  114:20;147:3,3;                  209:17;245:13;263:14;                  276:17;279:1</p> <p><b>paired (4)</b>                  110:2;112:4,20;                  115:16</p> <p><b>paper (3)</b>                  16:2;146:24;292:17</p> <p><b>paragraph (24)</b>                  99:13;105:15,19,20;                  106:7,8;108:8;116:6;                  209:23;212:1,6;                  213:20,22;217:16;                  218:25;219:16;221:2;                  222:6,7;230:18;237:1;                  239:3;242:11;260:9</p> <p><b>paraphrasing (1)</b>                  219:8</p> <p><b>Parcel (6)</b>                  4:10;255:11,12;                  256:18;258:18;293:14</p> <p><b>Pardon (2)</b>                  147:16;267:16</p> <p><b>parens (3)</b>                  92:19;247:7,8</p> <p><b>parenthesis (2)</b>                  25:2;45:22</p> <p><b>park (8)</b>                  81:3;86:2,4,17;                  87:13,14;98:8;154:12</p> <p><b>parking (19)</b>                  29:11;77:21;78:18,                  20;79:5,8,13,14,22,25;                  80:11;81:3,3;86:8,10,                  11,22;255:8,9</p> <p><b>Parks (1)</b>                  178:1</p> <p><b>part (29)</b>                  19:23;47:7;48:16;</p>	<p>49:7;67:6;92:13;93:16;                  120:9;123:22;149:24;                  153:8;181:18;184:10,                  12;185:25;188:10;                  191:7;216:7;223:5;                  227:9,23;238:11;                  247:6;257:15;259:17;                  279:25;303:22;305:19,                  20</p> <p><b>partial (1)</b>                  166:16</p> <p><b>particular (29)</b>                  20:21;24:7;35:17;                  36:5;37:23;61:20;                  66:24;71:9;105:2,9;                  106:16;108:17;168:25;                  169:13;170:21;178:23;                  236:6;259:20;283:23;                  290:2,18;291:2;294:8;                  295:18;297:19;298:17;                  306:1,5,12</p> <p><b>particularly (1)</b>                  183:3</p> <p><b>particulate (1)</b>                  196:25</p> <p><b>particulates (4)</b>                  171:17;196:6,7,10</p> <p><b>parties (4)</b>                  4:19;6:5;18:11;                  275:23</p> <p><b>parts (3)</b>                  154:5</p> <p><b>part-time (5)</b>                  161:14,16;165:1,11,                  14</p> <p><b>party (2)</b>                  17:14,16</p> <p><b>pass (2)</b>                  7:10;300:10</p> <p><b>passed (1)</b>                  275:11</p> <p><b>past (14)</b>                  16:11;73:6,20;75:19;                  84:8;105:25;133:16;                  136:8,22;164:23;                  196:9;241:15,15;                  252:22</p> <p><b>Pat (2)</b>                  4:22;97:5</p> <p><b>path (1)</b>                  78:21</p> <p><b>pattern (1)</b>                  9:7</p> <p><b>PDF (3)</b>                  246:12,13,15</p> <p><b>peak (69)</b>                  24:9,14,20;27:24;                  28:2,4,11;29:3,12;                  30:20,23,25;31:8,16;                  32:24;33:12;34:24,25;                  37:7,8,16;38:17;41:19,                  22;44:6,18;45:21;56:2,                  15,18,20,23,23;57:1,1,</p>	<p>6,7,9,14,24,24;58:4,14,                  18,22;59:9,10,12;60:7;                  61:1,10,18;65:14,15;                  76:11,12;77:24;78:2,3,                  5,11;108:22;295:16,17,                  17,20;309:23;310:4,24</p> <p><b>peak-hour (7)</b>                  22:8;30:17;37:13;                  44:4;52:15;61:8;76:21</p> <p><b>peaks (2)</b>                  60:13;288:9</p> <p><b>pedestrian (1)</b>                  6:14</p> <p><b>pedestrians (2)</b>                  78:21;79:18</p> <p><b>peer (22)</b>                  217:19,20,22,23;                  218:5,10,14;224:24;                  225:1,3,5,9,10;226:4,                  12;228:17;230:12;                  232:4,19,24,25;249:11</p> <p><b>peer-review (1)</b>                  226:12</p> <p><b>peer-reviewed (4)</b>                  13:9,13;233:16;                  250:10</p> <p><b>penetrated (1)</b>                  202:15</p> <p><b>people (20)</b>                  78:16,20;79:8,12,16;                  80:18;81:11,23;82:3;                  106:17;124:2;128:10;                  142:1;196:22;197:5;                  252:24;253:12;269:23,                  25;276:13</p> <p><b>per (14)</b>                  58:17;60:8;91:22;                  92:19;112:1;154:5,25;                  155:3;165:16;192:24,                  25;197:1,14;301:1</p> <p><b>percent (68)</b>                  30:24,24,25;31:6;                  52:15,20;53:9,10,24;                  54:4,15,16,20,23;55:7,                  17;56:11,12;58:21;                  59:9,17;60:6,12;61:16,                  19;65:12,14,21;74:16;                  137:6,6;140:23;                  204:16;205:18,19,19,                  25;281:12,22;282:2;                  287:9,11;288:14,21;                  289:13,18,19,25;                  297:17,18;298:22;                  300:5,18;301:10,18,22;                  302:20;303:5,10,23,24;                  305:9;306:19,21,24;                  307:11,15,16</p> <p><b>percentage (1)</b>                  31:13</p> <p><b>percentile (15)</b>                  103:19;104:1,4;                  106:10,11;107:2;                  112:2,18;116:11;</p>	<p>154:4,19,20;281:13,20;                  301:1</p> <p><b>perfectly (1)</b>                  228:7</p> <p><b>perform (1)</b>                  233:24</p> <p><b>performance (5)</b>                  234:17,20,24;                  247:15;301:16</p> <p><b>perhaps (9)</b>                  46:20;73:21;122:12;                  175:17;185:12;227:6,                  14;245:11;272:16</p> <p><b>perimeter (4)</b>                  290:5,13,15,21</p> <p><b>period (13)</b>                  7:15;8:13;28:15;                  37:25;56:24;76:21,21;                  108:17;142:15;180:15;                  196:1;257:14;297:18</p> <p><b>periodic (1)</b>                  165:15</p> <p><b>periods (1)</b>                  76:20</p> <p><b>permissible (1)</b>                  174:12</p> <p><b>permit (14)</b>                  206:25,25;207:1;                  211:22,25;216:2;                  225:9,16;226:3,6;                  254:25;309:5,9,11</p> <p><b>permits (3)</b>                  89:7;100:20;310:13</p> <p><b>person (6)</b>                  79:20;232:16;253:4;                  271:12;308:18,19</p> <p><b>personal (1)</b>                  141:16</p> <p><b>personally (1)</b>                  143:19</p> <p><b>perspective (4)</b>                  108:9,21;109:15;                  201:5</p> <p><b>pertain (1)</b>                  67:4</p> <p><b>pertains (4)</b>                  11:19;120:12;296:5,                  6</p> <p><b>petition (1)</b>                  4:4</p> <p><b>petitioner (1)</b>                  4:6</p> <p><b>phase (1)</b>                  252:22</p> <p><b>phone (3)</b>                  34:12,14,16</p> <p><b>photograph (1)</b>                  292:25</p> <p><b>pick (4)</b>                  18:5,11;130:10;                  149:1</p> <p><b>picked (2)</b>                  61:4;288:12</p>	<p><b>picking (3)</b>                  61:25;108:16;123:1</p> <p><b>picture (4)</b>                  79:24;139:20,25;                  140:10</p> <p><b>pictures (1)</b>                  75:19</p> <p><b>piece (3)</b>                  16:3;55:22;88:4</p> <p><b>pieces (2)</b>                  16:2;91:16</p> <p><b>place (13)</b>                  48:8;49:16;58:23;                  81:3;125:15;126:9;                  127:18;143:6;161:18;                  187:16;261:12;275:12;                  287:5</p> <p><b>placed (1)</b>                  297:2</p> <p><b>places (2)</b>                  94:14;126:22</p> <p><b>plan (5)</b>                  255:21;269:15;                  277:18;290:25;292:21</p> <p><b>planning (7)</b>                  6:11;14:7;18:9;98:8;                  178:2;272:21;277:17</p> <p><b>plans (1)</b>                  272:12</p> <p><b>plant (15)</b>                  236:18,18;237:2,4;                  238:3,4;239:4,6,15;                  242:7;243:5,12,16,18;                  253:4</p> <p><b>plants (1)</b>                  158:17</p> <p><b>Plaza (1)</b>                  4:9</p> <p><b>please (16)</b>                  4:19;16:23;43:1;                  67:19;69:2;86:14;91:8;                  100:2;128:12;147:14;                  198:24;230:8;244:10;                  245:10;260:24;293:10</p> <p><b>plenty (1)</b>                  11:21</p> <p><b>plotted (1)</b>                  178:17</p> <p><b>plug (1)</b>                  181:7</p> <p><b>plume (8)</b>                  237:18;243:4,7,14,                  16;250:7;253:23;290:9</p> <p><b>plumes (1)</b>                  249:15</p> <p><b>plural (1)</b>                  102:6</p> <p><b>plus (10)</b>                  40:13,13;119:23;                  290:5;301:17,22;                  302:19;303:22;306:24;                  307:12</p> <p><b>pm (5)</b></p>
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28:11;58:19;91:10; 203:4;311:20 <b>PM2.5 (20)</b> 90:25;91:6,11;95:18; 124:12;125:20,22; 126:2,24;140:20; 147:4,25;150:16; 160:14;161:5;165:24; 201:11,18;255:15; 257:18 <b>point (117)</b> 10:10;11:2;16:20; 17:17;24:21,25;25:16; 29:22;31:21;32:21; 38:11;39:19;40:6,6; 56:1;58:14;59:17;63:6; 74:17;79:5;80:23; 83:15;95:6;108:4; 112:3;113:1;115:4,7,8, 14,18,21;116:1,22; 117:23;118:2,14; 123:22;124:13;125:16, 23,25;127:17,23,24; 128:1,9;132:14;134:2, 20,23,25;140:13; 141:23,25;143:25; 146:6,9;153:18; 156:12,17;159:21; 160:5;163:14;165:5; 173:20;175:9,21,23; 177:5;178:1,3,25; 179:20;181:16,18; 184:21;185:9,10,11; 187:6;192:4,8;193:14; 196:17;197:5;200:16; 201:5;214:20;217:21; 220:6;229:1,11,17; 233:10,19;237:19; 238:24;239:24,25; 241:13;242:13,17,22, 25;253:11;259:20; 264:11;266:19;268:20, 24;272:13;278:25; 279:19;286:24;301:25, 25 <b>pointed (1)</b> 118:6 <b>pointer (3)</b> 29:25;291:14,20 <b>pointing (2)</b> 30:14;108:3 <b>points (6)</b> 20:2;67:11;163:21; 198:16;219:19;225:7 <b>policy (5)</b> 83:7;84:21;139:9; 166:18;201:5 <b>pollutant (3)</b> 85:14;104:11;105:24 <b>pollutants (1)</b> 146:16 <b>pollution (4)</b> 60:19;82:7;193:22;	261:2 <b>pool (4)</b> 135:16;254:6; 256:17;258:17 <b>Port (1)</b> 158:5 <b>portion (8)</b> 66:24;88:1;212:20, 21;214:12;279:15; 294:6;295:21 <b>portions (1)</b> 65:6 <b>posed (2)</b> 16:20;261:24 <b>position (14)</b> 8:22;16:9;55:11; 136:7;176:12;186:14; 195:24;207:4;216:21; 217:2,13;226:2; 263:25;264:25 <b>possibilities (1)</b> 76:5 <b>possibility (1)</b> 190:1 <b>possible (9)</b> 9:4;33:16,18,22; 159:9;234:23;259:8; 276:5;284:4 <b>possibly (2)</b> 102:9;287:5 <b>posture (1)</b> 216:2 <b>post-weights (1)</b> 165:4 <b>potential (3)</b> 12:15;191:24;309:21 <b>potentially (7)</b> 6:17;8:19;11:16; 122:9;269:19;270:9,10 <b>power (16)</b> 158:17;236:18,18; 237:2,4;238:3,4;239:4, 6,15;242:7;243:5,12, 16,18;253:4 <b>practical (2)</b> 77:22;228:15 <b>practically (1)</b> 288:10 <b>practice (4)</b> 173:24;187:18; 189:24;201:22 <b>pre- (1)</b> 165:4 <b>preceding (1)</b> 218:25 <b>precise (1)</b> 53:22 <b>precision (2)</b> 308:14;310:20 <b>preclude (1)</b> 16:21 <b>predictable (1)</b> 302:20	<b>Predicted (3)</b> 281:12,20;303:14 <b>predictions (2)</b> 309:23;310:5 <b>prefer (2)</b> 292:18,23 <b>preference (1)</b> 91:3 <b>preferred (14)</b> 206:3;208:4,6;211:7, 10,11,16;219:5;221:4, 9,14;222:1;228:10; 230:17 <b>prejudicial (2)</b> 8:12;16:14 <b>preliminary (4)</b> 5:21;7:13;17:1; 242:12 <b>premise (3)</b> 79:20;225:4;235:18 <b>prepare (1)</b> 8:14 <b>prepared (7)</b> 7:9;9:17;14:9;15:9; 19:2;23:19;96:1 <b>prescriptive (1)</b> 284:4 <b>present (1)</b> 77:7 <b>presentation (3)</b> 16:22;276:5,11 <b>presented (5)</b> 15:14,21;18:13; 109:5;262:3 <b>pressed (1)</b> 185:10 <b>Presumably (1)</b> 33:19 <b>presume (1)</b> 255:5 <b>pretty (12)</b> 35:15,18;80:12; 106:5;129:3,6;130:15; 163:13;190:9;234:5; 262:5;298:6 <b>Prevention (1)</b> 206:24 <b>previous (7)</b> 23:4;35:19;63:11; 95:1;115:24;143:3; 163:16 <b>previously (10)</b> 17:9,19;21:2,7;80:3; 119:8;120:10;136:18; 177:3;267:5 <b>primacy (1)</b> 207:20 <b>primarily (10)</b> 76:19;81:10;150:21; 236:17;237:2,17; 238:3;239:4;281:1; 288:19 <b>primary (3)</b>	127:12;249:7;276:14 <b>Prince (1)</b> 119:5 <b>principle (2)</b> 104:11;189:15 <b>print (2)</b> 146:22,23 <b>printed (1)</b> 188:8 <b>printing (1)</b> 146:24 <b>printout (4)</b> 15:24;36:5;151:9,16 <b>printouts (2)</b> 35:19;146:14 <b>probably (19)</b> 15:6;57:3;88:8; 104:24;127:9;169:1; 177:1;184:20;190:9, 10;196:4;233:16; 243:15;249:12;252:10; 300:25;306:7;307:11, 15 <b>problem (9)</b> 16:6;126:10;166:24; 172:13;185:12;233:11, 14;258:2;263:24 <b>procedural (1)</b> 7:13 <b>procedure (9)</b> 117:4,5;179:21; 234:25;308:14,21,23; 309:12;310:21 <b>procedures (3)</b> 216:14;235:1;309:13 <b>proceed (2)</b> 95:19;203:12 <b>proceeding (3)</b> 11:23;18:8;255:24 <b>proceedings (1)</b> 113:1 <b>proceeds (1)</b> 274:22 <b>process (16)</b> 9:10;16:15;141:3; 207:2,10,11,17;215:13; 217:13;226:12;227:4; 228:1,2;257:14; 258:15;275:25 <b>processes (1)</b> 227:11 <b>produce (3)</b> 55:17;99:17;211:4 <b>produced (2)</b> 8:10;300:3 <b>produces (1)</b> 248:9 <b>production (1)</b> 275:8 <b>productive (1)</b> 200:25 <b>proffer (1)</b> 74:25	<b>proffering (2)</b> 75:4,5 <b>program (4)</b> 156:14;215:9; 301:24;302:2 <b>programs (1)</b> 179:12 <b>project (3)</b> 196:6;201:4;292:15 <b>projected (2)</b> 63:5;64:24 <b>projecting (4)</b> 52:17;53:5,11,25 <b>projections (1)</b> 22:8 <b>promote (1)</b> 285:25 <b>promoted (1)</b> 261:4 <b>property (5)</b> 10:12;11:8;272:12; 292:4;294:22 <b>proportionately (2)</b> 55:1,7 <b>protocol (33)</b> 120:2,9,12,25;121:5, 7;122:14;124:2,7; 125:24;126:5,25; 127:17;140:25;141:2; 161:3;177:19,20; 178:7;181:16;182:5,6; 211:23;215:13;232:9; 235:1,3,5,7;238:25; 257:2,10;266:10 <b>protocols (5)</b> 207:8;261:10,13; 266:6,8 <b>provide (11)</b> 108:9;110:11;193:3; 232:19;249:9,9; 259:18;277:22;284:14; 298:15;306:10 <b>provided (27)</b> 8:22;21:10;31:24; 49:10;61:22;62:2; 111:10,15,22;112:11, 13;113:3,23;152:24; 156:11,25;178:2; 180:17;215:1;218:4, 13;224:24;233:16; 235:20;249:12,15; 285:5 <b>provides (3)</b> 113:8;261:6;298:18 <b>providing (1)</b> 136:12 <b>proximity (2)</b> 130:23;158:4 <b>PSD (1)</b> 206:24 <b>pseudo (5)</b> 237:9;239:21;252:7, 14,16
--	--	---	---	--

<p><b>public (6)</b> 4:2;10:14;28:22,24; 256:16;261:1</p> <p><b>published (3)</b> 242:2,2,3</p> <p><b>pull (6)</b> 16:13;63:11;77:8; 128:24;278:19;279:17</p> <p><b>pulled (2)</b> 61:1;246:7</p> <p><b>pumps (1)</b> 4:7</p> <p><b>purchase (1)</b> 20:14</p> <p><b>purely (1)</b> 63:21</p> <p><b>purpose (2)</b> 53:2;279:12</p> <p><b>purposely (1)</b> 77:6</p> <p><b>purposes (7)</b> 83:12;156:11;168:1; 193:24;235:10;242:15; 289:23</p> <p><b>pursuant (3)</b> 4:5;211:14;219:2</p> <p><b>purview (1)</b> 12:3</p> <p><b>put (39)</b> 27:10;31:20;54:10, 12;63:2;71:17;73:25; 74:9,12,12,15;75:7; 77:14;78:14;84:16; 86:9;112:23;121:21; 146:12;151:23;156:3; 157:20;158:14;172:2; 176:9;186:9;192:22; 195:8;201:2;216:3,6; 220:24;233:9;243:12; 275:12,16;289:7; 291:4;309:5</p> <p><b>putting (10)</b> 31:3,5;143:16;165:2; 199:4;200:21;253:9, 16;254:25;268:13</p> <p><b>PVMM (5)</b> 208:10;211:3; 242:14;247:1;279:24</p> <p><b>PVRM (13)</b> 208:18;209:24; 210:10,12;211:1,16; 212:2;219:4,10;221:3, 17,25;231:2</p>	<p>179:6,18,21,23;180:12; 193:21,23;201:18; 209:3;216:13;224:3; 256:13,14;257:24; 258:17;260:25;261:7; 265:1;266:4;276:14, 21,21;285:19;309:22</p> <p><b>quantifiable (1)</b> 263:9</p> <p><b>quantified (5)</b> 262:16;300:2;301:7, 8;309:1</p> <p><b>quantify (2)</b> 299:23;301:6</p> <p><b>quantifying (2)</b> 308:13;310:19</p> <p><b>quarter (3)</b> 156:1,4,6</p> <p><b>quasi-judicial (1)</b> 11:23</p> <p><b>queue (59)</b> 47:2,2,22,23;67:13, 13,15,21;68:1,8,11; 69:5;79:7;111:7; 115:12;116:2;135:18; 139:11;159:2;196:13, 22,23;201:2,3;237:20; 238:12,15;239:1; 252:24;253:10;255:16, 20;257:20;287:9,23; 288:17;289:12,23,25; 290:1,3,5,5;293:7; 294:4,8,14,15,22; 295:1;296:5,14,16,16; 297:1,8,20,22;298:23</p> <p><b>queues (10)</b> 49:6;68:7,14,17,18, 20;69:20;70:8;73:2; 241:1</p> <p><b>queuing (10)</b> 20:13,16;21:9;25:11; 67:11;68:24;69:11; 70:4,8;72:21</p> <p><b>quibble (1)</b> 123:21</p> <p><b>quick (2)</b> 37:25;153:8</p> <p><b>quickly (3)</b> 9:3;137:21;249:14</p> <p><b>quite (21)</b> 12:7;21:24;45:8; 137:21;156:4;188:12; 189:10,11,25;190:13; 223:2;239:19;241:16; 249:15;278:9;284:16; 287:21;298:7;302:10; 307:9,17</p> <p><b>quote (11)</b> 98:13,20;99:11; 103:12,14;107:3; 141:8;211:16,17; 260:1;286:2</p> <p><b>quote/unquote (1)</b></p>	<p>305:4</p> <p><b>quoted (1)</b> 102:4</p> <p style="text-align: center;"><b>R</b></p> <p><b>raise (3)</b> 16:23;272:20;276:17</p> <p><b>raised (5)</b> 217:21;229:13,15; 242:24;273:19</p> <p><b>ran (2)</b> 93:20;210:21</p> <p><b>range (9)</b> 56:12;77:15;190:12; 196:18;239:13,14; 243:9;300:24;306:14</p> <p><b>ranges (1)</b> 300:6</p> <p><b>rate (1)</b> 61:11</p> <p><b>rates (1)</b> 68:21</p> <p><b>rather (14)</b> 9:14;15:8;16:1;53:2; 58:13;82:14;84:22; 96:7,8;112:19;146:2; 172:3;282:1;286:4</p> <p><b>ratio (7)</b> 140:15;250:11; 289:24;297:2,11,13; 298:21</p> <p><b>ratios (8)</b> 115:19;136:24; 139:6,18;285:11; 287:3,4;298:18</p> <p><b>REA (2)</b> 247:7,14</p> <p><b>rea_finalpdf (1)</b> 246:10</p> <p><b>read (39)</b> 35:17;38:9,10,10,16; 40:10,17;45:12,20; 99:20;141:8;142:10; 164:18,20;165:15; 167:16;170:1,7,9,24; 184:23;187:24,24; 194:5,5;219:9;221:15; 244:24,25;245:1; 246:16;260:3,23,23; 261:23;265:19;270:18; 278:16;286:2</p> <p><b>reading (23)</b> 32:23;43:9;101:3,19; 170:16;184:5,25; 185:2;186:5;191:8,13, 19,20;193:8,9;201:19; 209:23;218:8;231:22; 247:13;260:4,5;299:10</p> <p><b>readings (22)</b> 90:25;91:12;134:5; 147:24;148:14;149:5; 150:8,15;152:23;</p>	<p>155:25;166:6;168:3,3; 173:18;181:3,5; 189:19,20,25;190:2; 195:17,18</p> <p><b>readouts (1)</b> 152:11</p> <p><b>reads (5)</b> 189:18;192:15,16; 299:17;309:20</p> <p><b>ready (5)</b> 17:18,23;95:19; 275:8;280:7</p> <p><b>real (5)</b> 100:18;241:14; 267:23;288:11;310:17</p> <p><b>realistic (4)</b> 108:10;110:25; 289:1,2</p> <p><b>realistically (1)</b> 288:18</p> <p><b>realize (2)</b> 152:21;172:13</p> <p><b>realized (2)</b> 101:7;178:16</p> <p><b>really (42)</b> 9:16;10:3;43:2; 59:23;62:23;66:7;74:7; 79:10;82:6;109:14; 125:17;130:15;156:23; 157:13;158:19;159:14; 168:24;171:22;189:14; 190:20,23,24;199:9; 200:18;229:21;234:9; 250:22;253:25;259:1; 261:9;262:7;265:13; 268:7,11;284:7; 287:24;288:1,11,13; 290:4;301:25;302:1</p> <p><b>reason (15)</b> 16:1;67:23;71:18; 79:7;101:10;136:16; 137:21;140:12;155:10; 185:25;190:2;196:21; 215:18;282:3;291:2</p> <p><b>reasonable (10)</b> 122:17;129:10; 138:14;178:18;184:1, 8;255:16;266:2,8; 307:11</p> <p><b>reasonably (6)</b> 7:24,24;107:19; 156:21;195:25;198:16</p> <p><b>reasons (9)</b> 25:14;108:3;125:2; 144:2;167:4;186:7; 189:17;227:17;276:2</p> <p><b>reassess (1)</b> 133:15</p> <p><b>rebut (1)</b> 271:11</p> <p><b>rebuttal (62)</b> 5:23;6:3,17;8:9; 18:17;20:20,22;22:22;</p>	<p>32:10,11;33:5;72:16; 73:25;120:10,17,20; 121:10,16,22;122:1; 129:15,21;135:2,24; 196:11,25;198:7; 203:18;204:11,19; 210:19;215:1;217:20; 219:18;225:1;229:24; 233:12,22;236:11,16, 22;247:22,24;249:18; 269:7,7;270:3,15,21; 277:16;281:11;284:23; 290:16;297:25;298:12; 300:1,18;301:7; 306:10;308:25;310:3; 311:17</p> <p><b>recall (85)</b> 19:20,22;20:10;23:2, 3,7,9,13;24:2,5,6;32:6; 34:16,16;38:24;40:3; 52:18;56:8,8,9,13,18, 22;57:2,5,8;61:7,22; 62:3;66:16,17,21,25; 67:1;68:10,22,23; 69:12,18,21;70:2,3,6, 10;71:2,3,5,9,10,11; 72:23;74:23;80:8; 83:23;104:18,23; 109:7;114:17;124:7, 10,11;125:8,9,12,21; 131:2;133:2;142:10, 19;144:8,22;159:6; 173:6;177:2,8,10,12; 188:14;208:2;240:16; 246:21;259:4,7; 293:15;294:23</p> <p><b>recalls (1)</b> 70:22</p> <p><b>recap (1)</b> 224:22</p> <p><b>receive (2)</b> 8:12;274:25</p> <p><b>received (12)</b> 113:4;217:19,20,22, 23;218:5,10,13; 224:24;225:1;230:12; 232:3</p> <p><b>receiving (2)</b> 8:7,11</p> <p><b>recent (9)</b> 28:9;72:16;82:12; 84:11;98:15;176:13; 215:16;233:3;247:8</p> <p><b>recently (1)</b> 241:14</p> <p><b>receptor (4)</b> 116:13;244:2;253:5; 296:2</p> <p><b>receptors (15)</b> 136:19;201:3; 238:13;243:24;252:21, 23;253:9,17;254:4,5,9; 255:1,4;257:13;297:9</p>
<p style="text-align: center;"><b>Q</b></p> <p><b>qualified (3)</b> 208:4;238:5;311:14</p> <p><b>qualify (2)</b> 208:6;240:7</p> <p><b>quality (30)</b> 34:4;100:19;101:12; 105:17;119:19;160:9;</p>	<p><b>quote/unquote (1)</b></p>	<p><b>readings (22)</b> 90:25;91:12;134:5; 147:24;148:14;149:5; 150:8,15;152:23;</p>	<p><b>rebut (1)</b> 271:11</p> <p><b>rebuttal (62)</b> 5:23;6:3,17;8:9; 18:17;20:20,22;22:22;</p>	<p><b>receptors (15)</b> 136:19;201:3; 238:13;243:24;252:21, 23;253:9,17;254:4,5,9; 255:1,4;257:13;297:9</p>

<p><b>recess (3)</b> 88:16;203:4;266:25</p> <p><b>recognize (6)</b> 18:24;95:9;96:6; 98:3;105:11;151:9</p> <p><b>recognized (1)</b> 309:1</p> <p><b>recognizes (1)</b> 116:16</p> <p><b>recognizing (4)</b> 308:13;309:21; 310:19,22</p> <p><b>recollection (27)</b> 22:11;23:21;29:6; 30:19,20;51:24;52:8; 54:13;62:2;64:19,24; 65:10;67:18;68:6;69:3, 7,11;79:1;80:7,10; 124:18;133:15;160:17; 176:22;180:14;187:3; 200:6</p> <p><b>recommend (2)</b> 113:10;253:9</p> <p><b>recommendation (2)</b> 4:17;265:17</p> <p><b>recommendations (2)</b> 98:9;217:10</p> <p><b>recommending (1)</b> 74:11</p> <p><b>recommends (1)</b> 284:18</p> <p><b>reconstruct (6)</b> 25:19;33:25;34:1,3; 37:22;49:8</p> <p><b>reconstructed (2)</b> 37:11;52:9</p> <p><b>record (34)</b> 16:13;17:6;31:20; 37:19;42:21;44:24; 53:23;63:3;70:12; 75:10,10,17;80:8; 83:21;86:9;89:11,12; 90:3;100:10;115:20; 141:7;145:11;197:18; 203:6;209:12;219:9; 224:8;230:8;251:19, 20;256:23;260:3; 267:1;275:21</p> <p><b>recording (1)</b> 201:18</p> <p><b>records (4)</b> 24:4;63:12;162:6; 234:12</p> <p><b>rectangle (2)</b> 294:5,8</p> <p><b>red (1)</b> 294:5</p> <p><b>redline (2)</b> 5:22;281:16</p> <p><b>redlined (3)</b> 204:23,25;236:21</p> <p><b>reduce (4)</b> 11:6;263:16,22;</p>	<p>264:3</p> <p><b>reduced (1)</b> 297:10</p> <p><b>reducing (1)</b> 109:25</p> <p><b>reevaluate (1)</b> 100:18</p> <p><b>refer (15)</b> 19:7;44:19;49:22,23; 69:8;163:4,9;167:13, 16;171:9;173:15; 276:24;284:17;292:23; 310:8</p> <p><b>reference (64)</b> 24:21;156:12; 161:15;163:18,23; 165:1,5,11,20;169:20; 170:3,7;175:6,6,7,22, 24;176:3,5,17;178:16; 179:2,25;180:1,19; 182:16,23;184:7,18,21; 185:1,3,4,13;187:5,18; 191:1,17,17,22;192:1, 8,13,14,16,23;193:7, 19;197:20;211:1; 246:3,8;250:5,19; 260:8;277:13,18; 278:2,4,6;298:4,16,18, 25</p> <p><b>referenced (10)</b> 32:2,3;39:24;242:9; 245:24;252:2;278:8; 285:14;298:5;301:11</p> <p><b>references (25)</b> 210:8;214:25; 233:16,16,20;235:8; 244:7,10;245:11,13; 249:12,20,20;250:6,8, 15;277:15;278:12; 285:4;287:11;291:7; 297:16,25;298:7;300:5</p> <p><b>referencing (6)</b> 168:23;204:19,19; 206:13;220:2;279:1</p> <p><b>referred (5)</b> 8:18;68:19;125:17; 149:2;242:4</p> <p><b>referring (45)</b> 16:6;19:25;20:21; 23:8;29:22;34:4;35:5; 42:12;44:9,25;46:14; 50:15;75:11;76:16; 85:15,16;86:19; 103:18;106:10;108:7; 113:22;116:8;119:22; 123:20;130:19;132:22; 142:23;152:2;164:14; 165:1,10;170:17; 209:9,18;214:12; 227:1;234:2;238:10; 248:17;279:13;280:1; 281:1,8;306:7;308:23</p> <p><b>refers (5)</b></p>	<p>128:20;162:24; 167:12;218:20;283:20</p> <p><b>refine (2)</b> 139:13,15</p> <p><b>refined (8)</b> 113:12;218:4,7,12; 224:23,25;230:19; 231:9</p> <p><b>reflect (2)</b> 204:17;205:17</p> <p><b>reflected (5)</b> 152:11,23,24; 210:18;224:25</p> <p><b>reflects (2)</b> 210:25;246:18</p> <p><b>regard (6)</b> 6:13;12:20;13:3; 105:9;189:1;271:25</p> <p><b>regarding (5)</b> 6:2,5,12;120:16; 224:1</p> <p><b>regardless (1)</b> 194:7</p> <p><b>region (2)</b> 145:3;201:12</p> <p><b>regional (8)</b> 207:21;211:18; 215:23;217:12;219:6; 221:6;235:12;260:13</p> <p><b>regional-measured (1)</b> 117:3</p> <p><b>Register (1)</b> 276:13</p> <p><b>regulate (1)</b> 303:25</p> <p><b>regulations (5)</b> 206:8;210:25;228:1; 259:15;275:12</p> <p><b>regulatory (12)</b> 98:21;99:21;102:5; 207:11;208:9,11; 211:8;215:7,8;227:2; 255:24;309:14</p> <p><b>relate (1)</b> 225:7</p> <p><b>related (4)</b> 8:19;250:10;282:9; 305:20</p> <p><b>relates (3)</b> 31:11;131:19;210:25</p> <p><b>relationship (1)</b> 298:10</p> <p><b>relative (12)</b> 31:8;53:14;58:21; 61:18;74:3;143:3; 152:19;156:23;178:25; 196:14;257:16;307:17</p> <p><b>relatively (4)</b> 127:3;131:22; 187:23;237:12</p> <p><b>released (1)</b> 288:15</p> <p><b>relevance (1)</b></p>	<p>70:21</p> <p><b>relevant (5)</b> 9:21;10:9;13:5; 145:10;178:13</p> <p><b>reliability (2)</b> 305:25;306:11</p> <p><b>reliable (2)</b> 194:3;195:25</p> <p><b>relied (3)</b> 38:11;42:5;203:21</p> <p><b>rely (15)</b> 98:21;99:22;102:5; 104:3;109:18,20,21; 110:15;111:9,13; 156:10;173:25;175:8; 176:4;180:1</p> <p><b>relying (1)</b> 13:10</p> <p><b>remain (1)</b> 13:19</p> <p><b>remains (1)</b> 197:5</p> <p><b>remember (18)</b> 55:19;57:9;65:2; 67:3;80:14,15;140:5; 141:9,21;142:7; 150:25;173:6;196:17; 221:8;239:17;240:8; 290:11;291:11</p> <p><b>remote (1)</b> 79:15</p> <p><b>repeat (3)</b> 50:8;81:9;290:14</p> <p><b>repeatedly (2)</b> 180:5;255:23</p> <p><b>repeating (1)</b> 132:9</p> <p><b>repetition (1)</b> 18:12</p> <p><b>repetitive (2)</b> 70:25;309:17</p> <p><b>rephrase (4)</b> 86:14;113:3;124:20; 204:12</p> <p><b>report (137)</b> 4:17;5:23;6:7,8; 18:22;19:1,11;20:6,20, 22;22:2,2,3,5,22;23:18; 28:9;33:21;34:5,9,12, 13,22;35:1,3,4,20;39:3, 14;42:6;43:15;47:13; 55:21;57:4;65:2;71:18; 72:16;73:25;77:11,15; 84:11;85:17;96:6,7,8,9, 11,15,16,19;98:5,7,8, 11;104:21,22,24,25; 105:7,12,14;106:4; 107:22,25;109:8; 112:14;120:10;135:25; 137:2;138:25;139:3; 176:22,23,25;178:14; 195:19;196:11,25; 198:7;203:18;204:11,</p>	<p>15,15,20;205:3; 210:19;215:1;216:20; 217:20;219:18;225:1; 233:13,17,22,25;235:4, 5,6,8;236:12,16,20,22; 239:3;240:15,17; 247:22,25;248:11,14; 249:18;257:21;277:16, 20;278:14,19,21,22; 279:8;281:11;284:8, 11,23;287:4;290:16; 298:1,11,12;299:1; 300:1,18;301:7,9; 306:10;308:25;309:6; 310:3</p> <p><b>reports (19)</b> 9:25;15:3;28:1;32:1, 2,23;38:23;62:7;80:10; 104:16;136:13;207:8; 229:6;244:9;245:22; 249:3;259:11,14; 289:16</p> <p><b>represent (5)</b> 107:11;119:19; 192:25;198:17;297:18</p> <p><b>representation (1)</b> 108:11</p> <p><b>representative (18)</b> 107:19;119:9; 122:24;123:23;129:24; 130:6,6,20,22;131:18; 133:14;145:3;156:21; 179:4;190:9;191:1,16; 201:23</p> <p><b>representativeness (2)</b> 53:12;55:11</p> <p><b>represents (3)</b> 22:7;167:24;201:17</p> <p><b>require (10)</b> 116:20;157:7; 205:22;206:2;207:12; 221:5;253:16;254:25; 284:20;300:7</p> <p><b>required (7)</b> 182:5;205:21;206:2; 211:22;234:20;238:14; 255:21</p> <p><b>requirement (1)</b> 207:3</p> <p><b>requires (5)</b> 211:17;217:18; 219:6;243:25;244:3</p> <p><b>research (1)</b> 68:18</p> <p><b>reserve (1)</b> 14:11</p> <p><b>residence (1)</b> 196:24</p> <p><b>residential (2)</b> 158:11;294:22</p> <p><b>resolved (1)</b> 12:4</p> <p><b>respect (6)</b></p>
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82:11;207:5;256:17; 280:13;305:14;310:4 <b>respond (4)</b> 7:16;13:21;139:16; 141:4 <b>responded (1)</b> 271:9 <b>responding (2)</b> 155:15;270:19 <b>response (13)</b> 6:12;9:12;77:17; 125:13,13;140:25; 157:6;178:1;238:11; 249:5;254:2;256:21; 271:8 <b>responsibility (1)</b> 217:12 <b>responsible (2)</b> 308:12;310:19 <b>responsive (1)</b> 253:18 <b>rest (6)</b> 47:16;71:25;155:24; 196:14;248:8;250:9 <b>restate (2)</b> 17:3,5 <b>restated (1)</b> 186:17 <b>restricted (1)</b> 58:19 <b>restrictive (1)</b> 59:15 <b>result (4)</b> 140:24;199:11; 211:13;219:1 <b>results (19)</b> 72:1;110:17;112:6; 189:7;197:19;204:17; 210:22;211:4;225:11; 235:9,21,23;236:1,4; 242:12;247:13,24; 248:12;303:14 <b>resume (4)</b> 17:18,23;280:8,9 <b>Resumed (1)</b> 18:17 <b>return (2)</b> 14:3;311:15 <b>review (41)</b> 7:15;8:21;15:4; 130:18;189:14;207:3, 9,12,18;216:2;217:19, 20,22,24;218:5,10,14; 223:9;224:25;225:1,3, 5,9,11;226:13;227:2,4, 22;228:6,18;230:12; 232:4,19,24;245:6; 247:8;249:12;251:23; 257:17;271:22;285:12 <b>reviewed (17)</b> 72:15;179:6,18; 206:19;211:24;220:22; 222:24;223:1;226:5;	228:3;234:14;245:5, 22;249:10;252:3; 255:17;280:23 <b>reviewing (2)</b> 215:9;235:7 <b>reviews (1)</b> 186:1 <b>revised (6)</b> 7:9,15;88:19,22,23; 215:19 <b>Richmond (9)</b> 149:2;154:1,7;155:4, 7,10;156:15;158:21; 302:9 <b>right (265)</b> 5:11,20;6:19;7:12; 11:20;12:11;13:24; 14:11;16:11,24;17:9, 11,11,12,17;18:16,19; 19:4;21:23;22:21; 23:14,16,20;25:25; 27:18,23;28:23;29:10; 30:10,12,14;33:6,14; 34:19;35:1;36:18;37:6; 38:8;40:14,21;41:3; 42:7;43:5,13,19,24; 44:13,23;45:1,1,4,6,6, 6,10;46:11;48:2,25; 51:9;54:7,17;55:16,19, 21,25;56:16,16;57:20, 21,22;58:10;59:5; 60:14;61:13;64:10; 65:18;66:6,9,11;69:15; 73:12;75:25;76:16; 88:10,10,15,18;89:4,6, 11,14;90:18,19;91:5,7; 92:3;94:14,16,21,25; 95:9,11,14,14,19,24; 97:11,17,19,19,21; 98:1,6;100:8;101:7; 104:6,6;105:1;106:19; 107:13;108:1;110:13, 13;112:25;113:20,24; 114:11;116:14;117:10, 17;118:10;126:4,20; 127:22;129:3,20; 130:2;131:7;133:11; 138:1,6,20;141:22; 142:12;143:21;145:19; 147:2,12,25;148:18; 149:4;150:2,5;151:18; 152:14;153:5,12; 154:16,22;155:6; 156:9,13,18;157:1,15; 158:19;160:1,3,13; 163:15;164:15;167:19; 168:20;169:4;171:5, 18;174:13,15,19; 176:19;177:21;179:14, 24;180:6;181:6,24; 182:21;183:9,22; 184:4;185:8,23; 187:16;188:15;191:24;	194:23;196:12;199:8, 15;200:1;201:7,7,10; 202:10,18,20;212:19; 219:25;222:3,11,18; 223:10;224:7,19; 230:22;233:8,10; 242:10;245:15;251:5, 15;253:24;257:9; 264:15;267:9;268:14, 15;269:4,5,14;270:5, 25;271:11,16;272:6; 273:6,15,22;274:16,20; 275:6;277:9,16,25; 279:11,16;280:2; 281:4;283:8,14; 286:18,23;288:2,10; 289:6,14;291:17; 292:6;296:1,10; 302:23;303:12;304:4; 308:8;311:15 <b>right-hand (5)</b> 38:6,16,16;41:2; 296:11 <b>ring (72)</b> 24:13,14;26:16; 27:11,15,20,20;28:20, 21;29:3,7,9,16;30:16, 19;32:4,22;35:10; 37:21;46:14;47:3,15, 19,20,24;51:22,25; 52:7,10;54:5;55:4; 56:9,16;59:8;61:17; 62:7;65:6,12,15;67:8, 12;68:2,15;71:20;72:1, 7,8,11,21;73:4,9,10; 74:1,2,13;77:9;79:21; 80:13;81:2;135:14,19, 20;137:17;159:2; 248:7;271:1;286:25; 288:8,9,10,19;289:9 <b>RING1 (1)</b> 49:19 <b>RING5 (2)</b> 27:18;48:14 <b>Risk (2)</b> 247:7;279:9 <b>River (2)</b> 133:1,3 <b>Road (87)</b> 4:8;24:13,14;26:16; 27:11,16,20,20;28:20, 21;29:3,7,9,16;30:16, 19;32:5,22;35:10; 36:13,15;37:1,22; 46:14,16;47:3,15,19, 20,24;51:22,23,25; 52:7,10;54:5;55:5; 56:9,16;59:8;61:17; 62:7;65:6,12,15;67:8, 12,12;68:2,5,15;71:20; 72:1,8,8,11,22;73:4,9, 10;74:1,2,13,24;75:2; 77:9;79:21;80:13;81:2;	135:14,19,20;137:17; 158:20;159:2;168:15, 20,21;201:4;248:7; 271:1;286:25;288:8,9, 10,19;289:9 <b>roads (11)</b> 28:22,24,24;32:4,22; 67:16;68:11;76:6,8; 77:9;158:16 <b>roadway (9)</b> 158:23;160:8;196:9; 242:6;253:8,9;279:13, 23;307:16 <b>roadways (18)</b> 21:23;22:18;24:18; 28:20,21;30:21;71:21, 21;72:3,6,11;130:25; 137:12;158:7,15; 243:21,23;288:20 <b>Rockville (3)</b> 122:15;124:4;183:8 <b>role (1)</b> 227:23 <b>rolling (1)</b> 273:4 <b>room (2)</b> 4:14;115:22 <b>Rosenfeld (192)</b> 6:2;8:18;18:2,8,11; 88:13;202:22;203:7,8, 10,13,14;204:21,23; 205:2,6,9,12,13; 209:12,15,17,19,20; 210:6,7;212:23;213:1, 4,7,10,14,16,25;214:2; 216:18;218:19,23; 219:21,25;220:6,9,12, 18,24;221:12,16,21,24; 222:4,15,18;223:2,13; 224:7,10,13,20;225:20; 227:24;228:5,17,20,21, 25;229:4,8,23,25; 230:7,10,11;231:14,16, 19,22;232:1,2;236:24; 240:12;242:18;243:2; 244:22;245:1,7,19; 246:14;247:10,18; 248:13;249:2;250:22, 25;251:3,5,7,12,14,16, 17;252:19;254:3,10,13, 16,17,22;255:10,22; 257:7,22;258:5,12,13; 259:12;260:22;261:20; 262:21,24,25;263:11, 12,18,20;264:12,15,22, 24;265:3,10,24;267:9, 14,17,21;268:18;269:9, 13,16,18;272:14; 273:2;276:7;277:7,13, 21,24;278:18,22,25; 279:6,19;280:4,7,10, 11;281:3,6,18;283:12, 16;289:20,21;291:3,	13;292:2,13,16,19; 294:9;295:10,12,15; 296:10,13,24;299:8,11, 12;304:7,9,13,23,25; 305:13;307:20,23; 308:2,6,9,10;311:8 <b>rough (1)</b> 252:9 <b>roughly (5)</b> 23:24;56:6;83:10; 195:17,18 <b>route (1)</b> 11:25 <b>rule (10)</b> 8:7,8;9:4;172:20; 183:14;201:20;276:15, 15;300:4;301:15 <b>rule-making (1)</b> 249:11 <b>ruler (3)</b> 216:4;256:12,16 <b>rules (1)</b> 276:1 <b>ruling (1)</b> 13:8 <b>run (6)</b> 180:8;197:16; 282:24;283:1,11,22 <b>Running (12)</b> 91:17,22;92:5,6,19; 156:7;188:4,4;233:1,1; 298:7;310:12 <b>runs (1)</b> 94:3 <b>rural (7)</b> 130:15;134:21,22; 135:6,12,17;136:9 <b>rush (1)</b> 24:10
<b>S</b>				
<b>S-2863 (1)</b> 4:4 <b>sacrificing (1)</b> 261:17 <b>safety (2)</b> 256:7,7 <b>sake (1)</b> 9:1 <b>salient (1)</b> 275:17 <b>Same (68)</b> 20:12;22:24;26:15, 17;40:8;45:2;50:1,4, 11;51:4,5,6;65:9; 79:18;83:10,17,19; 85:1,3;88:8;96:4; 97:18;104:16;106:6; 108:5,19;110:8; 116:13;117:16,23; 120:15;127:3;134:1,6; 140:9;159:13;166:22;				

176:3;178:9;180:18; 184:1;186:13;187:15; 195:2;196:5;210:16; 211:3;212:1,21;214:5, 5,10;217:21;228:3; 260:24;263:13;264:9, 20;286:10;288:5,17; 289:12,23;297:9,9,22; 305:23;309:19 <b>sample (4)</b> 166:18;173:14; 174:1;190:8 <b>samples (6)</b> 163:18;166:15; 190:8,10;195:25;196:3 <b>sampling (1)</b> 165:20 <b>sat (2)</b> 52:24;270:15 <b>satisfied (1)</b> 216:25 <b>Saturday (1)</b> 64:14 <b>SAVAGE (2)</b> 5:10,10 <b>save (2)</b> 146:23;227:13 <b>saying (98)</b> 29:3,18;31:6,13; 32:14;39:23;47:17; 49:9;50:20;56:18;58:3; 63:12;65:11;67:25; 72:24;73:4;74:4,23; 78:23;80:5,5;87:25; 99:9;102:20;106:12, 18;107:10;117:6; 118:11;120:8;121:8; 122:6,8,11,11;124:10, 16;125:13;135:22; 144:6,7,8,24;152:10; 153:4;157:1;161:24; 166:14;167:13,25; 168:1;169:16;170:21; 171:15;177:12;189:15; 191:10;192:4,5; 194:17,19;195:3,3; 197:11;211:2;216:2; 222:17,17,20,22,23; 225:14,14;227:7,14,18; 229:14;231:24;243:25; 253:2;254:20,24; 255:18;257:15,18; 259:7,25;260:18; 265:4;276:18;287:8; 288:23;301:21;302:18; 303:9,22;307:12,13 <b>scale (8)</b> 130:18;135:14,17; 293:7,9,10,11;303:6 <b>scaled (2)</b> 24:21;196:25 <b>scaler (8)</b> 28:18;29:18;30:8,22, 23;31:8,13,13 <b>scalers (5)</b> 28:19;31:19,19;32:4, 22 <b>scales (1)</b> 287:12 <b>scanned (1)</b> 233:8 <b>scenarios (1)</b> 145:9 <b>schedule (1)</b> 165:15 <b>scheduled (3)</b> 6:5,16;273:25 <b>Scheduling (1)</b> 267:2 <b>school (5)</b> 133:1;135:16;254:6; 256:17;258:17 <b>science (2)</b> 10:25;253:24 <b>scientific (22)</b> 217:19,20,22,23,23; 218:5,10,13;224:24; 225:1,3,9,10;226:12; 228:17;229:18;230:12; 232:3,12,19,24;302:19 <b>scientifically (5)</b> 226:4;227:8,19; 229:16;242:20 <b>scope (4)</b> 11:14;129:13; 130:19;280:17 <b>screening (2)</b> 229:10,11 <b>search (4)</b> 193:18;244:12; 245:18,20 <b>second (26)</b> 4:13;36:1,2,8;60:3, 16;91:15,23;100:3; 103:10;105:15,20; 106:4;107:23;108:8; 153:13;162:11;164:2; 166:3;209:10,23; 233:10;236:25;237:19; 238:11;242:3 <b>secondary (1)</b> 165:10 <b>secondly (1)</b> 197:17 <b>Section (26)</b> 4:5;18:22;212:6; 213:20;214:13;217:16; 219:15;221:2;222:6; 223:5;224:21;228:13; 231:7;233:20;260:9, 10;279:25;299:13,15, 16;301:5;305:23; 308:11,11,17;309:19 <b>Sections (4)</b> 211:14;219:2,3; 220:16 <b>seeing (4)</b> 71:9;99:12;133:24; 302:5 <b>seek (2)</b> 178:7;259:17 <b>seeking (1)</b> 284:18 <b>seem (7)</b> 8:9;13:1;26:3; 161:17;169:4;200:25; 264:5 <b>seeded (2)</b> 9:21;111:18 <b>seems (5)</b> 9:7;64:3;112:22; 120:17;202:17 <b>segment (4)</b> 46:14;87:24;88:3,7 <b>segments (1)</b> 279:23 <b>segue (1)</b> 286:8 <b>selected (2)</b> 229:10;305:15 <b>selection (5)</b> 127:4;131:2;260:15; 261:6;283:20 <b>send (2)</b> 145:22;277:7 <b>sending (1)</b> 277:3 <b>sense (16)</b> 10:24;12:17;84:17; 119:16;123:24;181:19; 182:8;255:25;257:12, 15,19;258:9;262:9; 264:17;265:20;281:22 <b>sensitivity (3)</b> 308:14;309:2;310:21 <b>sensor (1)</b> 179:24 <b>sent (5)</b> 5:23;15:23;93:2; 145:23;146:13 <b>sentence (22)</b> 99:20;101:4,6,19; 103:10;105:16,18,21; 106:6;108:7;209:24; 211:12;212:13;221:7; 237:11;238:2;247:3; 251:8,9;299:17,20; 309:19 <b>sentences (3)</b> 106:8;260:21,24 <b>separable (1)</b> 52:4 <b>separate (6)</b> 48:11;49:20;55:23; 91:3;92:16;150:1 <b>separately (5)</b> 93:18;168:7;195:21; 198:9;248:5 <b>September (1)</b> 38:23 <b>sequencing (1)</b> 69:4 <b>series (1)</b> 184:14 <b>seriousness (1)</b> 309:21 <b>serve (1)</b> 242:13 <b>served (1)</b> 152:7 <b>service (5)</b> 66:13,14,16;67:2; 69:24 <b>session (3)</b> 4:13;5:21;267:7 <b>set (21)</b> 16:3;20:19;23:4; 37:17;65:9;104:3,4; 122:17;145:6;155:11; 175:8;187:14;189:24; 193:1;214:15;221:2; 261:10,13;265:14; 276:18;280:24 <b>setting (3)</b> 32:13;145:8;232:18 <b>settings (1)</b> 245:23 <b>seven (3)</b> 59:14;76:14;266:22 <b>seven-and-a-half (6)</b> 78:17,24;79:2;80:4, 5,15 <b>several (11)</b> 15:21;19:4;60:8; 95:4;118:24;157:13, 19;236:14;252:20; 258:25;271:1 <b>share (2)</b> 205:12;278:12 <b>SHEARD (3)</b> 5:12,12,13 <b>sheet (5)</b> 33:19;148:25; 150:22;153:24;188:23 <b>shoes (1)</b> 235:12 <b>short (5)</b> 8:13;242:7;243:18; 269:23;287:5 <b>shorten (2)</b> 227:6;267:11 <b>Shortened (1)</b> 283:14 <b>show (34)</b> 35:16;47:14;48:23; 49:1;68:14;71:18,19; 80:9;104:19;105:1; 114:16;131:19;137:2; 144:14;175:11;176:14; 177:5;184:22;188:12; 200:20;204:10,14; 233:13;234:24;247:14; 278:9;291:7;292:24; 297:16;298:7;301:9; 304:14;308:25;310:9 <b>showed (25)</b> 81:23;108:21;109:8, 24,24;110:5,17,22,23, 24;111:11,20;112:2, 16;136:17,23;137:1; 160:7;177:1;196:24; 215:21;233:3;236:11, 11,13 <b>showing (31)</b> 34:23;36:19;44:4; 66:14;68:11;71:5,6,11; 75:19;80:22;100:17; 108:14,16;109:15; 111:25;113:4;125:24; 126:24;154:4;175:13; 177:7;180:18,19; 186:24;195:20;225:7; 246:20;295:18,19; 300:18;302:11 <b>shown (18)</b> 25:15;32:7;39:3; 50:3;68:21;70:16; 108:11;135:24;177:13; 234:18;253:11;289:16; 290:16;293:19,23,24; 294:5,7 <b>shows (16)</b> 15:25;22:2;34:24; 35:7,7;48:8;68:20; 79:4;87:7;113:5; 132:13;154:6,7; 240:23;298:20;300:23 <b>shut (1)</b> 307:21 <b>side (14)</b> 8:15;9:8;38:4,6; 45:24;84:22;133:3; 175:5,6;187:14,14; 215:5,5;296:11 <b>side-by-side (1)</b> 152:21 <b>sidewalks (1)</b> 253:10 <b>sign (3)</b> 69:10,19;202:8 <b>signal (1)</b> 67:20 <b>signals (1)</b> 68:4 <b>signed (1)</b> 205:3 <b>significance (1)</b> 55:5 <b>significant (7)</b> 72:3;160:3;162:2; 206:24;213:3;264:19; 288:1 <b>significantly (5)</b> 74:5;99:18;101:11; 131:10;185:10
---



<p><b>signs (1)</b> 69:16</p> <p><b>Silver (1)</b> 4:9</p> <p><b>SILVERMAN (54)</b> 5:5,5;12:19,20;13:1,13,22,25;17:2,7,11,13;30:4,7;70:24;75:6;172:22;202:4,6,11,25;203:1;216:11;223:16,20,24;224:6;259:11;262:5,6,6;268:1,2,3,6,7,10;271:17;272:4,10,16;273:1;276:10,12,20;277:1,5,8,10;278:1,6,8,14;292:6</p> <p><b>similar (8)</b> 69:22;106:21;122:13;187:23;188:2;189:7;210:17;211:4</p> <p><b>simple (1)</b> 232:22</p> <p><b>simplified (1)</b> 238:25</p> <p><b>simply (8)</b> 11:2;40:10;119:14;144:7,20;164:14;167:15;219:17</p> <p><b>single (13)</b> 55:20;92:16,18;94:22;138:21;140:10;142:17;176:7;178:10,23;181:17;200:8;265:17</p> <p><b>singly (1)</b> 101:12</p> <p><b>sit (3)</b> 25:8,19;66:18</p> <p><b>site (47)</b> 4:8;26:24;102:24;113:6;127:3;129:10;130:20;131:14;132:19,23,24;149:2;154:1;155:7,11,12,16;157:4,8,14,14,22;161:15,16;162:3,17;163:23;169:15,17,17,22,23;174:1;176:7;178:16,16,17,18,22;187:7,8,13;188:3;201:17;234:24;279:9;295:25</p> <p><b>sites (21)</b> 26:16;120:11;129:7;131:6,11,19;144:14;155:14;156:23;161:14;169:20,22;176:8;177:9;178:15;179:6,17;187:3,5,20;193:23</p> <p><b>site-specific (5)</b> 216:15;226:24;283:23;299:19;300:17</p> <p><b>sits (1)</b> 83:16</p>	<p><b>sitting (3)</b> 46:19;270:25;293:11</p> <p><b>situation (7)</b> 115:13;192:20,24;227:13;252:22;301:23,24</p> <p><b>six (6)</b> 144:13;165:6,21;169:24;188:4;272:13</p> <p><b>six-day (2)</b> 163:17;166:15</p> <p><b>size (2)</b> 190:8;213:3</p> <p><b>skip (1)</b> 45:10</p> <p><b>skipped (2)</b> 101:3;262:17</p> <p><b>slow (1)</b> 79:12</p> <p><b>slower (2)</b> 77:20;78:20</p> <p><b>slowly (1)</b> 250:11</p> <p><b>small (5)</b> 26:21,22;71:23;85:7;201:1</p> <p><b>smaller (3)</b> 50:12,22;51:1</p> <p><b>snapshot (1)</b> 71:9</p> <p><b>solely (1)</b> 65:6</p> <p><b>somebody (8)</b> 127:24;170:4;257:19;270:9;271:5,7;278:11;304:25</p> <p><b>somebody's (2)</b> 270:25;271:10</p> <p><b>somehow (4)</b> 12:9;78:4;159:22;181:3</p> <p><b>someone (6)</b> 75:7;126:22;127:10,15;128:3;270:15</p> <p><b>sometimes (5)</b> 74:14;77:20;84:3,13;179:22</p> <p><b>somewhat (1)</b> 204:3</p> <p><b>somewhere (6)</b> 33:19,24;122:12;188:16;291:17;300:25</p> <p><b>soon (1)</b> 202:8</p> <p><b>soothing (1)</b> 304:24</p> <p><b>sorry (46)</b> 5:16,19;11:13;19:23;20:1,7;21:11;26:10;36:3,7;38:8;44:7;45:13;49:23;53:7;67:19;69:16;86:21,23;87:5,5,5;90:16;94:4,12,</p>	<p>12;107:23;124:16;145:15;154:10;160:23;162:7;176:16;197:3;202:7,23;244:17,17;250:2;260:4;262:17;263:17;267:21;275:2;290:14;304:9</p> <p><b>sort (7)</b> 13:8;74:8;196:8;224:22;238:5;243:9;271:19</p> <p><b>sought (2)</b> 260:11,16</p> <p><b>sound (1)</b> 267:19</p> <p><b>sounds (4)</b> 48:2;57:22;98:17;212:7</p> <p><b>Source (37)</b> 68:19;115:11;211:4;229:11;234:11;236:6;237:12,20,20,23;238:13,15,16,18,19;243:24;244:5,6;247:5;248:5;249:7,7;250:20;251:23;252:21;253:11,17;255:2;283:6;286:4,5;287:24;290:20;293:7;296:3;297:3;298:14</p> <p><b>sources (35)</b> 15:6;49:4;55:5;72:3;99:19;101:11;105:23;236:17;237:1,7,10,17;238:3,7,9,10,11;239:4;244:15;247:6;248:7;249:5,21;250:4,16;279:1;285:13;287:10,13,23;288:8;289:13;290:10;297:20;306:2</p> <p><b>South (16)</b> 27:11;38:8;46:13,14,15,16;47:25;50:16;51:1;54:5,14,19;63:5;72:19;73:6;293:21</p> <p><b>southeast (2)</b> 137:20;295:24</p> <p><b>Southerly (1)</b> 294:19</p> <p><b>southern (25)</b> 27:15,20;37:21;47:3,19,20,24;51:25;55:4;56:9;59:8;61:17;62:7;65:6,11,15;72:1,11,21;73:4,9,10;137:16;294:5;295:21</p> <p><b>Southwest (1)</b> 25:2</p> <p><b>space (2)</b> 78:20;81:12</p> <p><b>spare (1)</b> 115:22</p> <p><b>spatial (3)</b></p>	<p>201:15;309:24;311:5</p> <p><b>speak (2)</b> 132:11;258:11</p> <p><b>SPEAKER (3)</b> 202:10,16;291:12</p> <p><b>speaking (1)</b> 24:19</p> <p><b>speaks (3)</b> 135:25;143:11,24</p> <p><b>special (13)</b> 4:5;12:4,18;23:6;170:3;207:2;227:22;256:2,8;294:6,12;295:25;296:17</p> <p><b>specific (9)</b> 16:19;203:17;206:16;223:6;234:24;245:21;265:18;285:17;302:17</p> <p><b>specifically (8)</b> 32:2,3;56:10;109:18;110:1;115:14;219:1;284:8</p> <p><b>specified (2)</b> 104:5;276:1</p> <p><b>specifying (1)</b> 261:3</p> <p><b>speculation (1)</b> 190:25</p> <p><b>Speculative (4)</b> 127:19;171:25;194:11,12</p> <p><b>speech (1)</b> 101:1</p> <p><b>speed (2)</b> 79:15,18</p> <p><b>speeds (2)</b> 58:16;67:9</p> <p><b>spent (1)</b> 196:5</p> <p><b>spikey (1)</b> 57:9</p> <p><b>spillage (1)</b> 20:2</p> <p><b>split (1)</b> 272:24</p> <p><b>spoil (1)</b> 272:2</p> <p><b>spot (4)</b> 69:25;70:4;87:18;187:15</p> <p><b>spreadsheet (5)</b> 15:21;16:4,5,7,21</p> <p><b>spreadsheets (7)</b> 15:3,16,17,19;16:12;49:6;68:21</p> <p><b>Spring (1)</b> 4:9</p> <p><b>squint (1)</b> 36:5</p> <p><b>St (1)</b> 132:1</p> <p><b>stable (1)</b></p>	<p>104:7</p> <p><b>stack (34)</b> 236:17,19;237:1,5,6,8,9,9,17;238:3,5,7,9,12,16,18,19,22;239:1,4,6,21,21,23,23;243:5;245:4;252:1,2,5,16,17;253:4,6</p> <p><b>stacks (16)</b> 236:18;237:2,7;238:3;239:4,8,15,18;240:13;242:8;243:13,18,19;252:7,9,14</p> <p><b>staff (2)</b> 34:11;178:2</p> <p><b>staff's (1)</b> 6:11</p> <p><b>Stage (39)</b> 110:14,14,20,20,23;111:2,2,6;204:12,13,14,14,24;236:11;281:12,19;282:3,11;283:18;284:6,24;285:8,18,22;286:11,24;287:15,19,20;288:3,23;289:1,22,22,25,25;300:23;303:1;307:14</p> <p><b>Stages (4)</b> 110:24;236:13;282:7;285:18</p> <p><b>stand (15)</b> 25:19;34:1;56:14;66:11;79:25;109:11;129:1;153:11;173:5;223:12;235:12;258:21;268:13;293:12;309:7</p> <p><b>standard (69)</b> 31:9;84:17;85:9;103:21;116:8,23;117:4,5;126:23;127:1,7;135:10;136:17,23;137:4;140:20;165:23;173:24;175:3;176:5;177:23;184:18,18;185:5,13;187:18;192:1,8,22,23;193:8,19,22;194:2;196:15;200:19;201:11,22;209:3;219:12;224:3;231:4;234:6;237:13,15;241:16,17;243:6;255:19,19;257:18;258:7,8;262:3;263:3,5,5,6,7,23;264:7;279:10;298:4,6;300:9,10,13;309:12,13</p> <p><b>standardized (1)</b> 208:11</p> <p><b>Standards (31)</b> 105:17;127:16;139:14;140:20;193:21;214:4,10,15,18;215:4;216:1,24;222:9;255:6;</p>
--	--	--	---	---

256:13,14;257:17,25; 258:17;259:2;261:9; 262:8;263:25;264:5; 265:1;266:1,3,4,4; 273:24;276:19 <b>standpoint (1)</b> 262:11 <b>stands (1)</b> 175:1 <b>staple (1)</b> 93:20 <b>stapled (1)</b> 93:18 <b>staples (1)</b> 93:20 <b>start (10)</b> 11:18;18:19,21; 19:17;83:15;96:4; 117:8;200:17;217:17; 295:7 <b>started (5)</b> 122:6;135:18; 136:13;139:11;141:3 <b>Starting (6)</b> 45:24;182:20; 249:19;263:1,2,18 <b>starts (5)</b> 101:4;105:16;108:8; 114:24;281:12 <b>State (14)</b> 11:4;102:15;116:4; 171:19;174:24;179:7; 18,22;186:1;207:18,19, 25;208:1;236:16 <b>stated (22)</b> 82:11;85:16;98:12, 18,19;102:15;106:24; 109:17;118:17;119:17; 124:6;128:5;141:5; 144:3;197:17;258:19, 24;259:16,16;265:15; 310:24,25 <b>statement (25)</b> 45:25;50:25;57:5; 60:5;98:25;99:8,10; 101:8,9;102:19; 104:13,16;111:22; 116:15;165:14,17; 215:7;253:7,15; 258:21;301:13;306:13; 307:17;309:7,9 <b>statements (2)</b> 13:16;305:1 <b>States (6)</b> 11:3;82:14;98:21; 193:20;260:12;299:22 <b>stating (5)</b> 28:1;82:17;85:10; 142:16;166:25 <b>station (54)</b> 4:7;10:17;11:9,11, 12,14,17,19;12:8,9,15; 22:10,13,16;26:9,24;	27:1,3,4,14;28:3,5; 30:17;34:20;40:13; 41:12;46:12;47:4; 51:11;61:12;62:14; 64:18,23;67:17;68:1; 71:20;72:2;86:12; 116:17;127:16;137:17, 19;196:11,12,20; 200:18;234:5,8; 236:18;237:4;238:4; 252:23;306:15,18 <b>stations (3)</b> 124:9;133:12;196:7 <b>statistical (1)</b> 128:25 <b>statistically (5)</b> 190:25;191:25; 193:1;200:13,15 <b>statistics (1)</b> 189:23 <b>status (2)</b> 211:14;219:2 <b>statute (1)</b> 276:1 <b>stay (4)</b> 39:5;80:15;178:11, 11 <b>stayed (1)</b> 197:12 <b>staying (1)</b> 175:16 <b>Steel (1)</b> 225:10 <b>step (5)</b> 42:9,9;227:4;235:7; 265:7 <b>steps (5)</b> 215:8,14;225:17; 310:14;311:6 <b>Sterling (1)</b> 21:9 <b>Steve (1)</b> 252:1 <b>stick (2)</b> 34:19;54:16 <b>still (23)</b> 17:18;20:20;24:24; 28:10;33:24;81:1,7; 85:2;87:13,17;115:18; 134:7;136:3;138:9; 140:8;156:7;178:10; 180:16,20;183:10; 273:5;287:18;291:17 <b>Stop (13)</b> 5:5,7;42:15;59:20; 69:10,16,19;139:20,25; 163:25;179:14;275:7; 293:21 <b>stoplights (1)</b> 69:17 <b>stopped (1)</b> 79:9 <b>stops (1)</b>	133:9 <b>storage (1)</b> 19:19 <b>store (6)</b> 50:6;53:14,20;55:14, 25;82:14 <b>straight (4)</b> 112:19;283:1,10; 297:14 <b>strategies (1)</b> 261:3 <b>Street (12)</b> 129:10;132:1,19,23; 142:25;167:18;168:11, 18,19;183:7,10;255:1 <b>strictly (2)</b> 8:9;284:13 <b>strong (1)</b> 241:15 <b>studied (1)</b> 239:9 <b>studies (12)</b> 13:11;80:22;160:6; 196:9;234:21;245:3,5, 22,24;249:3;275:13; 278:9 <b>study (14)</b> 241:19;244:8;246:5, 18,20;251:19,20,21,22; 252:13;275:15;277:14; 278:2,2 <b>subject (4)</b> 4:8;174:17;271:6,9 <b>submit (1)</b> 7:1 <b>submitted (7)</b> 7:6;8:4,19,9:22; 86:16;95:4;132:12 <b>submitting (2)</b> 6:7;207:8 <b>subparagraph (2)</b> 212:14;213:18 <b>subsection (6)</b> 19:18;217:10; 219:21;224:22,23; 260:24 <b>subsections (2)</b> 214:13;217:18 <b>substantial (4)</b> 70:7;72:18;74:4; 237:17 <b>substantially (11)</b> 40:11;41:10,14;42:2; 50:2,12,22;71:25; 84:19;188:13;248:9 <b>subtract (1)</b> 111:14 <b>suburban (7)</b> 107:19;119:9,19; 120:1;123:23;124:1; 130:15 <b>sucks (1)</b> 165:3	<b>sufficient (5)</b> 77:19;198:16; 287:25,25;288:11 <b>suggest (3)</b> 34:4;71:21;228:7 <b>suggested (2)</b> 124:9;264:13 <b>suggesting (10)</b> 181:8;182:24; 218:19;220:1,13,17,21, 23;228:5;247:15 <b>suggests (1)</b> 142:1 <b>Sullivan (57)</b> 5:14,17;6:8,9;14,17; 13:10;14:7;15:9,12; 16:7;17:18;48:10; 59:18;62:17;95:4;99:7; 100:2,21;101:22; 110:20;111:18;112:8, 21;139:24;141:5; 144:2;149:2;151:10; 152:7;162:5;163:25; 167:23;169:7;184:12, 17;186:14,18;193:7; 203:15;205:15;219:17; 220:1,3;222:21; 229:18;241:7;247:19; 248:17;251:18;252:17; 262:5,6,14;263:14; 267:5,10,24 <b>Sullivan's (11)</b> 5:23;6:17;8:20;16:5; 48:20;267:15,18,22; 277:16,20;311:17 <b>summarized (1)</b> 284:6 <b>Summary (5)</b> 36:17,25;152:11; 278:15;279:17 <b>summation (1)</b> 273:7 <b>summations (4)</b> 271:25;272:10,20,24 <b>summer (2)</b> 84:24;95:4 <b>superior (1)</b> 242:14 <b>superseded (8)</b> 104:24;214:23,24; 215:3;223:15,18,21; 224:5 <b>superseding (2)</b> 105:7;223:18 <b>supplement (1)</b> 105:7 <b>supplemental (1)</b> 96:17 <b>supplemented (1)</b> 223:16 <b>supplementing (1)</b> 6:11 <b>supply (1)</b>	205:4 <b>support (6)</b> 8:21;249:12,16; 250:12;298:1,21 <b>supporting (1)</b> 65:4 <b>suppose (2)</b> 130:18;283:11 <b>supposed (3)</b> 176:9;264:1,2 <b>sure (63)</b> 8:11;9:16;12:7; 14:17,18;16:14;32:19; 33:7;44:8;50:8;57:2; 58:10;69:8;74:12; 79:12;81:7,13,21; 83:24;86:13;87:21; 89:25;90:1;96:13; 97:20;102:11;109:2, 13;115:2;120:12; 125:2,4;126:11,11; 160:5;168:24;171:1, 15;172:7;173:19; 179:8,10;190:3; 198:23;199:5;204:18; 219:22;221:22;222:12; 234:1;240:20;244:19; 245:2;246:17;260:25; 262:6;267:11;269:23; 272:13;276:3;278:10; 280:22;292:9 <b>surprise (2)</b> 175:1;192:18 <b>surprised (2)</b> 84:2;197:16 <b>surrebuttal (9)</b> 9:15;54:12;143:23; 268:23;270:12,16; 271:6,15,16 <b>surrounding (15)</b> 98:14;103:13; 104:15;107:1,17; 114:15;118:19;119:4, 13,14;123:2,7;130:10, 16;135:8 <b>suspect (1)</b> 12:2 <b>suspense (1)</b> 272:3 <b>sustain (3)</b> 127:20;129:16;172:1 <b>sustained (1)</b> 129:18 <b>swap (1)</b> 146:23 <b>sweeping (2)</b> 13:8,16 <b>swing (1)</b> 55:17 <b>sworn (1)</b> 17:19 <b>system (3)</b> 45:3;104:2;282:9
---	---	---	--	--

<p><b>systems (1)</b> 193:22</p> <hr/> <p style="text-align: center;"><b>T</b></p> <hr/> <p><b>Table (14)</b> 22:25;23:16;37:23; 38:24;39:1,9,10,24; 40:7;42:6,11,19;43:7; 139:24</p> <p><b>tables (2)</b> 65:3;108:12</p> <p><b>tabs (2)</b> 93:2;95:4</p> <p><b>tailpipe (2)</b> 297:15,17</p> <p><b>Takoma (1)</b> 158:13</p> <p><b>talk (14)</b> 15:9;16:9;60:17; 183:12;195:11;200:25; 203:1,19;206:12; 210:10;244:14;260:17; 274:11;290:3</p> <p><b>talked (11)</b> 16:7;32:12;57:15; 89:19;122:20;124:3; 139:18;233:15;234:9; 281:10;310:20</p> <p><b>talking (51)</b> 17:9;18:2;41:18; 55:19;56:5;58:23;59:1; 60:19;63:20,21;68:1,4; 72:6,7,8;76:20;89:3; 92:1;97:24;102:25; 107:17,18,22;108:2; 120:13;126:2,3;129:6; 134:11,17,24;135:18; 139:11;156:14;158:22; 190:5;196:6;200:17; 201:1;221:23;225:5; 248:23;252:24;255:14; 268:25;290:4;300:14; 302:4;305:3,5,22</p> <p><b>talks (3)</b> 162:10;225:24;306:5</p> <p><b>tall (1)</b> 239:8</p> <p><b>tank (5)</b> 19:19;238:17,18; 240:6,6</p> <p><b>tanks (1)</b> 20:3</p> <p><b>Target (6)</b> 47:25;73:7,20;74:14; 79:12;86:20</p> <p><b>task (1)</b> 215:17</p> <p><b>tautological (2)</b> 194:17,24</p> <p><b>technical (1)</b> 82:8</p> <p><b>technique (2)</b></p>	<p>226:4;228:12</p> <p><b>techniques (6)</b> 212:4;213:19; 219:14;222:5;229:12; 231:6</p> <p><b>Telegraph (3)</b> 168:15,20,21</p> <p><b>telling (6)</b> 59:12;65:8;140:6; 141:12;162:24;179:10</p> <p><b>tend (2)</b> 117:8;211:4</p> <p><b>tends (1)</b> 58:16</p> <p><b>tens (1)</b> 287:12</p> <p><b>TEOM (33)</b> 161:16;162:3,4,5,20, 23;163:23;165:10; 167:12,13,24;168:12, 23;169:7,12,18,25; 170:6,21;171:2,19; 172:25;173:7,10,17; 174:3,24;175:5,12,18, 21,23;180:4</p> <p><b>TEOMs (2)</b> 162:25;176:2</p> <p><b>term (9)</b> 108:10;113:21; 119:7;134:17;167:8; 221:14;222:19;223:23, 24</p> <p><b>terminology (4)</b> 161:13;164:13,14; 165:8</p> <p><b>terms (36)</b> 12:24;13:10;34:7; 63:4;65:19;66:9;73:9; 77:15;78:16;80:16; 82:6;84:5;85:1;98:12; 104:13;107:21,22; 113:17;117:1;126:1; 128:6;130:16;134:15; 145:5;176:6;201:10; 229:20;254:2;255:5; 275:19;285:17;286:11; 297:19;303:22;305:6; 306:13</p> <p><b>Terrace (1)</b> 133:1</p> <p><b>territory (2)</b> 159:14;186:13</p> <p><b>tested (2)</b> 210:14;247:21</p> <p><b>testified (28)</b> 21:24,25;33:11;40:4; 43:18;44:6;48:11; 52:23;61:2,3,8;69:24; 80:3;112:24;114:13, 17;116:20;118:19; 121:16;122:14;128:8; 144:16;178:14;184:17; 187:12;230:13;259:13;</p>	<p>302:7</p> <p><b>testifies (3)</b> 15:8;117:20;185:17</p> <p><b>testify (14)</b> 14:9;26:5;109:11; 114:14;143:23;153:20; 174:12,18;184:24; 185:7;232:4;269:21; 270:16;271:7</p> <p><b>testifying (5)</b> 56:22;61:7;115:5; 124:5;174:11</p> <p><b>testimony (65)</b> 6:3,5;8:20;32:10,11, 23;38:3;41:9;44:15; 52:13,18;56:1,13;57:2; 63:1,11;66:19,22; 70:10,11,15,22;72:19, 23;73:1;74:23;75:7,18; 83:20,23,25;84:1;86:9, 15;109:5;112:22; 118:3,17;120:18; 121:10,21,23;122:1,25; 123:7;141:9,21;142:7; 144:16;152:7;157:12; 185:11;193:15;202:19; 204:3;208:7;258:24; 261:24;266:14;268:17; 270:23,24;290:12; 298:3;301:8</p> <p><b>testing (2)</b> 210:18,21</p> <p><b>That'd (3)</b> 200:13;266:23; 303:15</p> <p><b>that'll (2)</b> 267:12;303:25</p> <p><b>theme (1)</b> 144:23</p> <p><b>theoretical (2)</b> 233:12,14</p> <p><b>Theoretically (3)</b> 71:16;244:4;275:25</p> <p><b>there'd (1)</b> 165:22</p> <p><b>therefore (3)</b> 211:17;219:5;220:15</p> <p><b>thinking (2)</b> 13:8;242:1</p> <p><b>third (12)</b> 56:6;65:24;106:8; 187:24;189:19,20; 190:1;191:19;220:19; 222:23;229:9;309:19</p> <p><b>though (10)</b> 33:24;46:9;60:3; 61:3;87:17;134:21; 207:4;215:10;298:16; 305:14</p> <p><b>thought (25)</b> 21:17,19;28:12,17; 47:2;58:24;59:4,6; 80:16;93:13;115:21;</p>	<p>116:23;164:6;171:10; 172:13,18;180:5; 213:4;218:24;228:1; 238:5;258:25;280:4; 306:23;310:15</p> <p><b>threat (1)</b> 10:6</p> <p><b>three (57)</b> 27:9;66:18,21;79:14; 82:4;91:18;98:15; 105:25;110:17,23; 113:19;114:4,10; 124:12,13,17;125:22; 131:17;153:9,13,14; 157:8,16,17,18;165:6, 16,21;168:6,9,16; 173:21,22;176:13,21; 177:2;178:15;183:7,9; 187:12,14;189:19; 197:18;198:6,17; 199:13;204:4;206:10, 18;219:3,23;231:18; 241:5;252:7;281:9; 282:6;283:12</p> <p><b>three- (1)</b> 166:15</p> <p><b>three-day (1)</b> 163:17</p> <p><b>three-page (2)</b> 91:18,18</p> <p><b>three-year (2)</b> 178:10;197:12</p> <p><b>threshold (7)</b> 221:1,1;222:8;223:3, 7;230:1,3</p> <p><b>throughout (4)</b> 9:5;10:10;12:22; 210:9</p> <p><b>throw (2)</b> 45:16;227:14</p> <p><b>thrown (1)</b> 186:2</p> <p><b>thumb (2)</b> 300:4;301:16</p> <p><b>Thus (1)</b> 299:22</p> <p><b>tie (1)</b> 32:9</p> <p><b>tied (1)</b> 35:10</p> <p><b>Tier (37)</b> 116:8;141:19;204:7, 10;205:17,21,24;206:3, 8,11,19;207:12;225:23, 24;226:1,18,18,19,25; 229:9;281:21,23,24; 282:2,4,13,15,22,24; 283:1,2,3,4,10,11; 284:25;285:1</p> <p><b>tiering (1)</b> 282:9</p> <p><b>tiers (5)</b> 204:4;206:10,18;</p>	<p>281:10;282:5</p> <p><b>times (32)</b> 40:7;42:16;43:18; 57:15;69:1;73:7;82:20, 25;83:1;84:2;85:25; 100:16;113:19;114:4, 10;117:15;118:2; 121:10;122:25;134:18; 155:5;157:13,19; 187:25;199:13;231:18; 252:20;258:25;261:19; 286:10;289:17;298:3</p> <p><b>timing (1)</b> 80:25</p> <p><b>tiny (2)</b> 200:17,17</p> <p><b>title (5)</b> 94:2,4,6;209:1; 223:25</p> <p><b>titled (1)</b> 299:16</p> <p><b>today (16)</b> 6:16;8:22;14:8,18, 19;15:12;25:8,19; 33:17,23;120:13; 145:13;156:7;291:2, 14;298:16</p> <p><b>together (17)</b> 15:5;16:13;29:17; 68:17;78:14;93:21; 143:17;176:9,14; 181:4;195:22,23; 198:6,10;199:5; 201:13;248:7</p> <p><b>told (10)</b> 157:4;162:5;169:12; 171:2,8,24;180:4; 194:20;208:5;290:16</p> <p><b>took (5)</b> 27:9;53:20;60:18; 271:19;283:12</p> <p><b>top (16)</b> 36:9,18,24;95:10; 99:13;123:16;177:8; 190:13,14;215:21; 225:22;239:7,16; 240:16;281:9;294:23</p> <p><b>topic (6)</b> 12:20;67:3;233:17; 272:25;278:19;308:4</p> <p><b>total (26)</b> 22:8;37:13;38:4,5, 17;41:11;50:18;52:3; 53:5;54:13;56:3,5; 64:24,24;65:20;82:18, 25;83:3;84:8,25;99:16; 111:11;195:23;225:23; 296:3;303:4</p> <p><b>totality (3)</b> 50:13,22;265:16</p> <p><b>totally (1)</b> 134:21</p> <p><b>totals (2)</b></p>
---	---	---	---	--

<p>35:11;64:25  <b>touchstone (2)</b>                  261:9,11  <b>toward (1)</b>                  234:18  <b>towards (5)</b>                  46:12;47:25;50:6;                  52:11;121:9  <b>tracer (1)</b>                  234:21  <b>tractable (4)</b>                  98:22;99:23;101:21;                  102:7  <b>trade (1)</b>                  260:13  <b>traffic (57)</b>                  21:9;22:3,5,8,25;                  23:4;27:15;29:12;31:9,                  11;33:11;34:10;38:23;                  39:13;40:5,11,12;41:9;                  43:14;44:4;46:21;                  47:20;52:15,19;54:22;                  56:2,15;58:24,25;59:9;                  60:12,18;61:1,4,11;                  62:14;63:18,21;64:4,4,                  17,23;65:17;67:9;68:8;                  69:4;71:14;81:25;88:4;                  89:15;119:24;268:23;                  269:6,9,23;270:16;                  272:11  <b>transcript (9)</b>                  57:11;114:18,20;                  259:4;261:23,23;                  263:13;270:18,19  <b>transient (4)</b>                  116:2;253:10;255:2,                  20  <b>transit (1)</b>                  79:21  <b>transport (2)</b>                  305:6,21  <b>travel (4)</b>                  82:1;244:7;287:2;                  288:11  <b>traveling (1)</b>                  51:22  <b>treat (2)</b>                  238:20;288:2  <b>treated (12)</b>                  237:8;238:19;                  254:18;288:5,6;                  289:12,22;297:4,5,11,                  21;300:9  <b>treatment (2)</b>                  80:1;305:19  <b>treatments (4)</b>                  99:3;117:7,10;197:7  <b>tremendous (2)</b>                  76:16;180:16  <b>tremendously (1)</b>                  239:12  <b>trend (2)</b>                  186:24;195:20</p>	<p><b>trends (3)</b>                  177:2,4,7  <b>tried (11)</b>                  10:9;32:20;74:21;                  77:25;215:10,15;                  217:2;253:18;275:23,                  23;276:2  <b>trouble (1)</b>                  291:23  <b>truck (5)</b>                  83:9,16;84:7;237:8;                  252:11  <b>trucks (36)</b>                  82:11,13,19,19,22;                  83:1,11,13,17,21;84:6,                  7,24;85:11,12,19,21,                  22;86:1,5,16,21,23;                  87:2,13,14,17;158:25;                  238:23;240:13;252:8;                  270:23,25;271:3;                  297:23;298:1  <b>true (6)</b>                  60:10;67:8;99:2;                  165:13;252:18;262:9  <b>trump (1)</b>                  193:2  <b>try (27)</b>                  10:25;11:6,18;16:15;                  22:15;42:8;44:19;                  62:24;63:6;79:5,9;                  95:5;96:23;128:12;                  136:19;139:10;147:2;                  156:19;168:25;172:3;                  205:7;255:3;263:4;                  264:2;275:20;286:9;                  295:6  <b>trying (60)</b>                  9:3;11:22;15:8;16:8;                  24:24,25;25:5,5;32:18;                  33:1,13;35:17;36:5;                  40:16;42:8;43:1,2;                  48:13,22;49:18,21;                  59:7,7;62:8,18;64:2;                  76:3,6;77:12;99:11;                  100:7;107:11;118:2,                  10,15;121:11;122:5;                  129:23;133:5,8;                  136:20;144:4,4;                  151:25;156:20;157:25;                  164:5;176:6;182:10;                  188:11;207:15;220:22;                  225:16;248:21;249:1;                  250:23;282:5;291:16;                  300:14;309:17  <b>Tuesday (2)</b>                  145:25;146:3  <b>turn (11)</b>                  5:20;26:1;47:23;                  114:19;162:10,10;                  163:16;280:12;282:10;                  299:13;307:19  <b>turned (2)</b>                  144:12,15</p>	<p><b>turning (7)</b>                  21:23;35:7;36:13,16,                  24;37:17;130:9  <b>turns (1)</b>                  180:5  <b>Twenty-four-hour (1)</b>                  148:4  <b>twice (2)</b>                  23:11;74:14  <b>two (70)</b>                  49:13;56:14;57:13,                  21,23;60:7,13;66:20;                  78:8,8,19;83:11,13,17;                  93:2;97:9,24;104:20;                  109:8;110:10;134:15;                  135:7;147:3,3;149:10,                  13;158:4;166:20;                  173:22,24;175:6,6,10,                  22;176:14,17;178:25;                  179:2,25;181:5;                  182:15;185:14;187:5,                  17;189:5,19;190:2;                  192:21;195:22;196:1;                  198:11;214:19;231:12,                  25;237:16,16;244:13;                  246:21,24;248:4;                  249:9;260:21,24;                  271:2;283:14;300:5,                  19;301:10;306:19,25  <b>two-and-a-half (9)</b>                  78:19;81:2,4,8,14,20,                  22;241:5;252:6  <b>two-page (1)</b>                  93:9  <b>two-thirds (3)</b>                  47:10;191:9,11  <b>tying (1)</b>                  33:8  <b>Tyler (12)</b>                  208:17;209:4;                  217:14;221:20,21,24;                  242:4;245:8;280:19,                  19;281:2;284:1  <b>type (5)</b>                  116:8;207:3;211:5;                  299:19;300:16  <b>typical (9)</b>                  31:9;129:6;173:14;                  237:24;239:5;301:14,                  18;303:23;309:5  <b>typically (5)</b>                  79:14;173:11;239:8;                  253:3;301:14  <b>typing (1)</b>                  146:19</p>	<p><b>umbrage (1)</b>                  169:5  <b>unaware (1)</b>                  109:4  <b>uncertainty (17)</b>                  77:15;189:4;299:16,                  23;300:2,6,8,11,19,23;                  301:6,9;303:21;305:4,                  6;309:8,11  <b>under (43)</b>                  17:18;36:13,14,24,                  25;136:16,17;137:3;                  145:8;163:3;174:11;                  197:3,4;200:19;                  201:11;208:5;211:22;                  212:5;217:10,14;                  219:14,19,21;220:14,                  16;222:5;223:4,8,8;                  224:22;226:3,3;                  227:16;228:12;231:6;                  233:7;235:14;278:10;                  284:15;288:3;299:16,                  17;300:25  <b>underestimated (1)</b>                  301:3  <b>underestimates (1)</b>                  234:19  <b>underground (4)</b>                  19:19;20:3;238:18;                  240:6  <b>underlying (5)</b>                  18:20;216:20;                  229:22;242:23;253:20  <b>underscores (1)</b>                  10:11  <b>understatement (1)</b>                  84:23  <b>understood (6)</b>                  9:11;157:12;160:5;                  208:5;232:4;306:23  <b>undisputed (1)</b>                  12:8  <b>unfair (1)</b>                  262:2  <b>unfortunately (1)</b>                  45:16  <b>UNIDENTIFIED (3)</b>                  202:10,16;291:12  <b>uniform (2)</b>                  244:4;253:22  <b>unique (1)</b>                  252:22  <b>United (2)</b>                  11:3;98:21  <b>universities (1)</b>                  7:6  <b>University (11)</b>                  25:1;29:17;30:21;                  47:15;70:20;71:8,25;                  159:2;160:20;162:19;                  307:4  <b>unless (4)</b>                  79:7;226:4;270:18;</p>	<p>271:7  <b>Unlike (1)</b>                  292:16  <b>unnamed (1)</b>                  27:6  <b>Unnecessary (1)</b>                  6:9  <b>unreadable (2)</b>                  35:15,18  <b>unrealistic (2)</b>                  80:2;138:18  <b>unrepresentative (1)</b>                  143:8  <b>untrue (1)</b>                  165:17  <b>unusual (9)</b>                  104:1,2;170:5;189:6;                  253:17;283:9;284:17,                  19;286:4  <b>up (106)</b>                  18:5,11;22:13;23:24;                  24:12,25;12:27;10,15;                  29:16;32:13;36:18;                  37:21;39:16;43:3;46:1,                  3;48:24;49:1;52:2;                  54:23,25;55:9;56:4;                  57:15;58:3;61:20;62:3;                  63:11;66:11;67:11;                  70:9,16;71:7,13;72:8,                  20;73:4,8,16,19,20,20;                  74:14,17,21;75:19;                  77:21;79:16;81:6,12,                  24,24;82:3;85:13;98:7;                  109:3;111:18;112:22;                  114:7;121:2;128:24;                  139:17;142:24;149:2;                  155:11;156:3;157:3;                  161:3,17;163:21;                  175:10;187:14;190:2,                  4;193:13,15;196:16,                  25;197:2;200:11;                  202:19;235:14;244:18;                  246:15,16;253:18;                  263:15,21;267:11;                  272:24;278:20;279:17;                  282:5;288:21;289:19;                  291:1,4;298:2,2;                  299:11;300:21;303:6,                  7;307:7,12;308:9  <b>up-and-down (1)</b>                  56:25  <b>update (2)</b>                  23:7;94:3  <b>updated (16)</b>                  15:15;16:7,8;21:4,7;                  22:25;23:1;65:1;                  111:25;112:13;113:4;                  136:13;151:2;209:5;                  215:19;225:25  <b>updates (1)</b>                  21:8  <b>updating (1)</b>                  15:23</p>
---	--	--	---	--

<p><b>upon (34)</b>                  21:8;29:11;31:9;                  35:8;38:11;42:5;59:5;                  61:10;64:15,17;74:2;                  83:8;104:3;109:20,21;                  110:15;111:9,13,25;                  122:18;155:22;156:21;                  175:8;176:4;177:15;                  180:1;234:3,4;236:12,                  14;285:4,11;287:6,11</p> <p><b>upper (3)</b>                  288:13,13;296:10</p> <p><b>urban (2)</b>                  135:20,25</p> <p><b>urban/rural (1)</b>                  280:24</p> <p><b>usable (1)</b>                  122:9</p> <p><b>use (135)</b>                  8:17;9:13,14,17;                  16:10;22:21;29:12;                  30:25;39:10,24;40:7;                  41:17,20;42:19;46:4,6;                  47:25;57:18;61:7;                  62:11;65:1;66:12;                  84:16;85:3;101:15,20;                  102:13;103:14,25;                  106:10,18;107:14;                  111:3,19;112:9,19,24,                  25;113:2;115:16;                  116:5,18,21;119:18;                  122:7,18;124:6,10,20,                  23;125:7,14,21;127:2;                  129:23;132:18;134:21;                  135:6,23;136:8;                  138:22,24;140:22,23;                  141:6,13;142:14;                  143:5,8;144:24;157:8;                  160:16;164:13,14;                  167:8,17;171:19;                  176:25;177:18;179:1,                  3;181:17;182:18,20;                  183:20;184:10;187:18;                  196:2;201:17,22;                  203:20;210:12;211:2;                  212:3,4,21;218:18;                  219:11,14;221:1;                  222:4,8;223:3;226:11;                  227:14;228:11;231:3,                  3,6;235:24;241:11;                  243:1;244:1;247:15,                  15,19;249:13,16;                  250:13,15;256:12;                  259:19,20;261:7;                  280:24;282:17;284:7,                  15;285:8;287:16;                  292:13;298:21;299:16;                  302:13;306:2</p> <p><b>used (113)</b>                  6:3,7,15;21:2,7,23:1;                  24:9,11,15,20;28:4,19;                  29:3,18;30:2,17,20;                  32:22;33:12;35:19;</p>	<p>39:12,24;42:12,14,20;                  43:11,22;46:7,18;47:5,                  18,19;61:9;80:7,7,9,23;                  82:2;85:4;102:16;                  106:6,21,25;108:25;                  109:12;110:5;111:15;                  113:18,21,22;114:21;                  115:5,7;117:7;118:2,                  18;119:10;129:25;                  134:17;141:15,17;                  144:7,21;145:2;                  154:25;161:4;165:8;                  168:5;171:23;176:12,                  14;177:2,3,9;182:23;                  184:2,5,15;192:2,17;                  193:24;196:19;203:18,                  25;207:12;210:22;                  211:10;218:4,13;                  222:19;223:22;224:24;                  229:20;230:19;233:5;                  234:15;237:17;240:24;                  245:3;247:4;248:10;                  249:10;252:3;256:16;                  271:3;282:19;283:18;                  285:14;291:11;297:18;                  299:18,24;300:16</p> <p><b>useful (3)</b>                  309:20;310:1,22</p> <p><b>uses (6)</b>                  16:12;45:2;80:6;                  102:12;106:5;221:14</p> <p><b>using (107)</b>                  8:22;15:12;16:15,21;                  19:18;21:11,18;22:12,                  15;24:7;27:2,24,25;                  28:2,10,18;29:4;31:1,5,                  8,20;32:4,23;38:1;                  40:12;41:11;65:5,8;                  76:11;77:24;78:2;                  85:17;98:13;107:22;                  108:20,24;110:15,17,                  23;112:4;114:14;                  116:11;117:2,2;119:7,                  8,11;120:23;121:17;                  122:15;124:9;126:6;                  128:5;134:15,20;                  136:24;137:3;138:20;                  139:8;140:9,9,10;                  157:10,11;161:13,20;                  167:15,15;177:24;                  183:2,13;184:1;192:7;                  197:13;216:4,16;                  218:1,15,16;226:7,14,                  18,18,19,19;228:8;                  229:14,19;233:1;                  246:20;249:6,7;259:4;                  277:17;279:24;284:11,                  12;287:9;288:20;                  300:4;302:18;303:20;                  305:17;307:14;309:7;                  310:17,17</p> <p><b>UST (1)</b>                  19:23</p>	<p><b>usual (1)</b>                  82:14</p> <p><b>usually (7)</b>                  81:13,15,19,21;                  189:16;234:21;301:17</p> <hr/> <p style="text-align: center;"><b>V</b></p> <hr/> <p><b>vacuum (1)</b>                  165:3</p> <p><b>validate (1)</b>                  145:18</p> <p><b>validated (1)</b>                  218:16</p> <p><b>validation (7)</b>                  217:23;225:6,13;                  226:13;227:1;234:25;                  310:8</p> <p><b>Valley (6)</b>                  29:15,16;30:15;                  36:12,15;37:1</p> <p><b>value (31)</b>                  24:15;56:20;59:10;                  61:9,18;64:6;65:4;                  106:15;118:18;132:18;                  135:8;138:21;139:9;                  142:14,17;144:24;                  145:7;146:14;155:4;                  159:4;161:4;175:2;                  176:7;177:3,25;                  190:18,18,18,19;                  289:18;302:20</p> <p><b>values (37)</b>                  10:12;11:8;58:22;                  91:19,23;92:7,14;                  93:11,13;94:1,15,21;                  99:16;115:19,25;                  117:3;140:21;144:6;                  145:8;159:4;162:11;                  173:12;188:12;189:24;                  190:12,17;191:9,12,22;                  198:10;200:8,10;                  201:23;210:17;225:12;                  272:12;310:10</p> <p><b>Values-Yearly (4)</b>                  91:17,22;92:5,19</p> <p><b>variability (1)</b>                  189:16</p> <p><b>variation (1)</b>                  189:5</p> <p><b>varied (1)</b>                  68:13</p> <p><b>varies (5)</b>                  190:11;239:12,19;                  299:18;300:16</p> <p><b>various (12)</b>                  7:6;15:6;33:20;                  35:10;68:11;77:12;                  100:18;104:3,3;145:9;                  189:17;287:1</p> <p><b>vary (5)</b>                  61:14;189:10,25;                  290:21,23</p>	<p><b>varying (2)</b>                  18:21;74:9</p> <p><b>Vegas (2)</b>                  13:11;302:10</p> <p><b>vegetation (1)</b>                  130:16</p> <p><b>Vehicle (10)</b>                  36:13,16,24;82:23;                  84:14,20;241:1;243:7,                  11;252:6</p> <p><b>vehicles (30)</b>                  20:13;21:7,8;35:7;                  50:25;51:1,16;52:11;                  61:18;82:24;84:2,18;                  85:2,9,18,23;86:2,2,19;                  158:24;238:23;241:1;                  286:16;289:17;297:21;                  298:8,9,9,10,19</p> <p><b>Veirs (2)</b>                  4:8;30:21</p> <p><b>vent (8)</b>                  19:24;237:7;238:17;                  240:5,6,9;252:8,16</p> <p><b>verbal (2)</b>                  125:8,13</p> <p><b>verified (1)</b>                  38:3</p> <p><b>verify (1)</b>                  38:13</p> <p><b>verifying (1)</b>                  270:8</p> <p><b>version (15)</b>                  5:24;98:7;120:22;                  151:2;204:23;205:1;                  209:5,8;214:21,22;                  215:16,21,23;236:20,                  21</p> <p><b>versus (17)</b>                  5:25;42:12;55:4,12,                  14;56:3,6,11;65:21;                  69:19;110:4;126:24;                  168:3;180:20;197:1;                  199:4;288:3</p> <p><b>video (3)</b>                  71:9,10,11</p> <p><b>videos (3)</b>                  70:15;71:6;75:19</p> <p><b>View (11)</b>                  5:12;29:15,16;30:16;                  36:13,15;37:1;185:3;                  228:7;301:25,25</p> <p><b>violate (4)</b>                  127:16;244:3;                  255:19;258:16</p> <p><b>violates (1)</b>                  172:20</p> <p><b>violation (1)</b>                  100:17</p> <p><b>violations (2)</b>                  127:11;309:22</p> <p><b>Virginia (11)</b>                  5:12;119:6;147:8,9;                  149:1,8,16;150:6,7,9;</p>	<p>153:24</p> <p><b>virtually (1)</b>                  168:3</p> <p><b>visitors (1)</b>                  256:8</p> <p><b>VOC (1)</b>                  20:2</p> <p><b>VOCs (1)</b>                  19:22</p> <p><b>volatile (1)</b>                  262:15</p> <p><b>volume (5)</b>                  53:9;58:24;59:9;                  60:12;82:14</p> <p><b>volume/level (1)</b>                  66:13</p> <p><b>volumes (3)</b>                  44:4;52:15;69:4</p> <p><b>voluminous (1)</b>                  8:12</p> <hr/> <p style="text-align: center;"><b>W</b></p> <hr/> <p><b>wait (14)</b>                  26:4;29:20;35:12;                  78:22;92:15;93:12,12;                  145:21;174:8,10,10,10,                  10;185:6</p> <p><b>waive (1)</b>                  6:24</p> <p><b>walking (2)</b>                  79:15,16</p> <p><b>wants (6)</b>                  39:16;113:10;182:7;                  185:7;273:3;304:25</p> <p><b>warehouse (7)</b>                  22:10,14;70:5;72:2;                  82:22;84:12;87:3</p> <p><b>warmed (1)</b>                  299:11</p> <p><b>warming (2)</b>                  10:4;275:13</p> <p><b>warning (1)</b>                  202:14</p> <p><b>washing (1)</b>                  10:12</p> <p><b>Washington (9)</b>                  122:6;123:21;                  131:11;132:20;149:11,                  22;150:4;158:13;                  187:15</p> <p><b>Washington/Arlington/Alexandria (1)</b>                  149:9</p> <p><small>Washington/Arlington/Alexandria/DC/Virginia/Maryland/West (1)</small>                  147:7</p> <p><b>Washington/Maryland/Virginia (1)</b>                  128:22</p> <p><b>waste (1)</b>                  186:11</p> <p><b>watched (1)</b>                  182:1</p> <p><b>way (67)</b>                  13:17;37:18;54:14;</p>
--	--	--	--	--

<p>55:18;70:16;71:7;73:7;                  21;79:19;82:17;88:14;                  97:8;100:17;106:17;                  107:3;110:6,11,11,23;                  112:7;113:8,12;                  114:16;120:12;127:4;                  135:14;136:8;167:16;                  169:25;171:18;172:3,                  4;173:15,23;174:16,                  22;176:8;178:18;                  179:3;181:20;187:13;                  192:11,12;194:8;                  195:9,16;196:3;197:2,                  10;200:18,22;214:20;                  215:19;216:17;221:8;                  223:14;225:8;228:5;                  234:23;262:11;264:20;                  271:19;275:16;282:23;                  289:7;301:15;310:12</p> <p><b>ways (14)</b>                  51:3;100:18,19;                  109:9;110:10,17,23;                  111:17;137:1;217:6;                  236:10,15;247:21;                  282:6</p> <p><b>web (7)</b>                  169:14;172:24;                  173:2,4,6;193:9,19</p> <p><b>website (10)</b>                  15:25;16:2;128:23;                  146:15;147:23;151:13,                  16;156:2;171:12;278:7</p> <p><b>Wednesday (1)</b>                  146:2</p> <p><b>week (14)</b>                  28:16;39:17;59:14;                  60:7;62:18;76:14;                  95:24;149:3;155:6;                  157:3,13;271:1;                  275:14,18</p> <p><b>weekday (21)</b>                  22:8;27:24;28:11,15;                  29:12;56:25;57:7,14,                  24;58:6;59:10;60:7,9;                  61:5,6,11,18;63:5;65:7,                  13,15</p> <p><b>weekdays (4)</b>                  56:17,21;58:18;                  59:13</p> <p><b>weekend (26)</b>                  55:23;56:2,3,15,19,                  24;57:6,13,21,21,24;                  58:4,14;59:9;60:9;                  61:6,18;64:17,21;65:9,                  11,14;70:9;72:20;75:2;                  311:19</p> <p><b>weekend/weekday (1)</b>                  58:22</p> <p><b>weekends (1)</b>                  57:1</p> <p><b>weeks (2)</b>                  57:20;155:16</p> <p><b>weeks' (1)</b></p>	<p>155:20</p> <p><b>weight (3)</b>                  12:24;13:2,6</p> <p><b>Welcome (1)</b>                  17:21</p> <p><b>welfare (3)</b>                  10:7,14;256:7</p> <p><b>well-defined (1)</b>                  301:18</p> <p><b>well-honed (1)</b>                  268:8</p> <p><b>weren't (7)</b>                  83:24;85:17;109:14;                  115:11;116:1;194:3;                  239:17</p> <p><b>West (6)</b>                  36:12,15;37:1;38:9;                  137:20;147:9</p> <p><b>Westfield (3)</b>                  4:10;17:14,16</p> <p><b>what's (30)</b>                  8:18;18:12;27:17;                  37:9;41:25;53:7;                  127:23;128:9;132:14;                  139:11,19;141:23;                  143:25;153:18;156:22;                  161:12;177:20;187:8;                  200:14;206:13;208:8;                  209:1;211:10;223:17,                  17;239:5;250:20;                  260:8;264:1;277:11</p> <p><b>Wheaton (16)</b>                  4:9,10;101:12;                  107:12;119:10;122:13,                  24;130:21;133:14;                  143:9;157:14,22;                  158:6;159:1;306:15,18</p> <p><b>whenever (2)</b>                  44:19;89:9</p> <p><b>whereas (1)</b>                  8:17</p> <p><b>Where's (2)</b>                  40:19;73:11</p> <p><b>Whereupon (4)</b>                  88:16;203:4;266:25;                  311:20</p> <p><b>whole (15)</b>                  59:1;71:17;78:14;                  79:13,25;96:7,8,9;                  149:1;150:7;183:23;                  189:21;213:3;277:10;                  305:9</p> <p><b>Wholesale (1)</b>                  4:3</p> <p><b>Whoop (1)</b>                  146:20</p> <p><b>wide (1)</b>                  190:11</p> <p><b>widely (1)</b>                  189:25</p> <p><b>width (1)</b>                  290:20</p> <p><b>wind (1)</b></p>	<p>58:16</p> <p><b>winnow (1)</b>                  6:20</p> <p><b>wish (1)</b>                  234:6</p> <p><b>within (24)</b>                  11:14;12:3;24:13;                  58:4;68:24;70:4;81:13,                  19;196:4;208:19;                  210:2;218:7;219:11;                  223:4;228:8;231:2,3;                  258:18;288:15;289:24;                  290:1;296:14;297:3,3</p> <p><b>without (11)</b>                  9:9;11:11,21;34:3;                  55:10;74:5;132:24;                  133:24;218:1,16;                  284:12</p> <p><b>Witness (128)</b>                  17:19,20,22;19:12;                  24:20;31:15;38:19;                  43:17;47:21;49:2,22;                  60:5,20,22;69:12;76:9;                  92:23,25;96:15;                  100:10;102:3;110:22;                  115:1;131:10;133:12;                  134:5;140:5;141:24,                  25;143:15;144:8;                  145:17;151:22;152:18;                  153:1,5,20,21;158:3;                  163:9;167:10;169:3;                  170:17;171:6,9;                  172:24;174:11,21;                  176:19;178:24;179:19;                  183:17;185:10;186:19;                  189:2;192:9;193:9,13,                  18;198:15,21;209:18;                  213:6,24;216:12;                  220:4;223:12,19,25;                  227:17;239:23;240:4,                  8;241:9,13,19,23;                  242:1,22;245:5,15,17;                  248:4;252:18;254:20;                  255:7,13;257:10;                  258:3;260:9;262:14;                  266:23;269:1;278:13;                  279:3,12,21;280:22;                  281:17;282:24;283:5,                  9;286:15,19,24;287:17,                  22;288:5,8,25;289:3,5,                  7,11,15;291:6;292:1;                  294:4;299:10;301:23;                  302:22;303:1,12,15,18;                  304:4;305:1;311:11</p> <p><b>witnesses (7)</b>                  6:16;184:19;269:14;                  274:5,7;275:10;304:5</p> <p><b>wondering (3)</b>                  13:3;17:13;272:17</p> <p><b>word (7)</b>                  175:21;218:20;                  223:21;230:16,19;                  262:10;267:20</p>	<p><b>words (10)</b>                  57:4;73:5,14;103:3,                  14;109:22;175:4;                  259:5;263:1,3</p> <p><b>work (9)</b>                  23:5;34:9;218:21;                  220:20;225:15;227:3;                  251:25;301:16;307:8</p> <p><b>workable (1)</b>                  301:24</p> <p><b>worked (1)</b>                  9:6</p> <p><b>workers (1)</b>                  256:7</p> <p><b>working (3)</b>                  19:5;179:23;310:16</p> <p><b>works (2)</b>                  148:24;263:7</p> <p><b>world (2)</b>                  11:3;272:17</p> <p><b>worst (1)</b>                  60:19</p> <p><b>worth (3)</b>                  83:3;242:13;310:11</p> <p><b>wrap (1)</b>                  308:9</p> <p><b>write (2)</b>                  4:17;94:13</p> <p><b>writing (2)</b>                  102:1;124:8</p> <p><b>written (7)</b>                  32:2;97:2;125:9,13;                  148:14;273:6,7</p> <p><b>wrong (7)</b>                  161:11,12;164:8,15;                  186:4,6;265:4</p> <p><b>wrote (2)</b>                  99:1;100:12</p> <p><a href="http://www.wpagov/head/research/frm_femhtml">www.wpagov/head/research/frm_femhtml</a> (1)                  193:20</p> <p><b>www.wpagov/ttn (1)</b>                  246:17</p>	<p>91:19;92:5;176:7,10;                  192:12</p> <p><b>years (7)</b>                  37:20;98:16;105:25;                  142:23,24;157:8;                  282:19</p> <p><b>years' (1)</b>                  310:11</p> <p><b>yes-or-no (2)</b>                  256:21,22</p> <p><b>yesterday (5)</b>                  15:2;111:24;146:13;                  174:5;185:25</p> <hr/> <p style="text-align: center;"><b>Z</b></p> <hr/> <p><b>zero (5)</b>                  154:15;190:12,14;                  196:17,17</p> <p><b>zeroes (1)</b>                  196:18</p> <p><b>zone (6)</b>                  290:18;297:3,4,4,9,                  19</p> <p><b>zoned (1)</b>                  4:11</p> <p><b>Zoning (3)</b>                  4:5;10:18;275:25</p> <hr/> <p style="text-align: center;"><b>0</b></p> <hr/> <p><b>005 (1)</b>                  196:24</p> <hr/> <p style="text-align: center;"><b>1</b></p> <hr/> <p><b>1 (35)</b>                  5:21;6:10;25:2;49:4;                  68:19;116:8;141:19;                  149:14,14;169:20;                  187:3;192:14;195:17;                  197:4;204:7,10,17,24;                  205:17,21;225:23;                  226:18;281:10,11,17,                  19,19,21,23,24;282:2,                  4;284:1;292:23;307:6</p> <p><b>1.0 (1)</b>                  260:9</p> <p><b>1.7.2 (1)</b>                  18:22</p> <p><b>1.88 (2)</b>                  154:25;155:5</p> <p><b>1:29 (1)</b>                  203:4</p> <p><b>10 (77)</b>                  4:10;6:11;21:7,15,                  18,19,20;22:2,19;                  23:18;24:7;25:3;26:21;                  27:8,8;29:23;34:8;                  35:13;38:12;39:2,4,12,                  13,16;42:5,7;43:12,24;                  44:1;45:11,13,14;50:3,                  13,24;52:25;53:21,22,</p>
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23;55:20;56:4,4;61:24; 82:14,20,24;83:1,6,9, 11,17,22;84:3,3,24; 85:24;111:10,15; 112:5;113:13;155:16, 20;165:16;166:12; 190:10;197:1,3; 233:16;240:9,21,21; 249:12;275:4;288:15; 289:18;298:20;307:15 <b>10.3 (1)</b> 183:8 <b>10:00 (1)</b> 60:9 <b>100 (14)</b> 30:24;137:6,6; 140:23;204:16;205:18, 19,19;243:13;281:22; 282:1;300:25,25; 302:18 <b>1037 (1)</b> 42:1 <b>104 (1)</b> 57:21 <b>107 (1)</b> 143:7 <b>10-day (2)</b> 8:7;172:20 <b>10-foot (1)</b> 240:9 <b>10-minute (1)</b> 83:8 <b>10th (2)</b> 191:20;196:4 <b>11 (18)</b> 44:12;114:24; 165:16,21;166:12,18; 200:5;204:17,24; 205:14,14;233:4; 261:25;280:21;281:11, 11,14,17 <b>11.3 (2)</b> 175:13;183:8 <b>11.6 (2)</b> 183:7,11 <b>11.73 (1)</b> 178:11 <b>11:20 (1)</b> 88:11 <b>110 (2)</b> 163:17;295:9 <b>111 (5)</b> 35:9;45:25;46:7; 142:18;143:2 <b>11160 (1)</b> 4:8 <b>1-13 (3)</b> 23:17;25:4;26:21 <b>11a (1)</b> 22:6 <b>11th (2)</b> 191:21;215:22 <b>12 (7)</b>	4:13;113:6;166:13; 188:4;197:15;282:10; 284:7 <b>12.1 (5)</b> 161:4;162:3;176:25; 177:8,13 <b>120 (6)</b> 163:17;192:24,25; 195:17;200:10;294:11 <b>121 (7)</b> 111:10,11;113:15; 300:24;302:11;303:2,7 <b>128b (1)</b> 66:11 <b>1291 (2)</b> 53:2,5 <b>12th (7)</b> 18:22;191:21;267:8, 9,12;275:4;311:16 <b>13 (3)</b> 65:23;113:6;284:23 <b>130 (3)</b> 51:18;52:4;294:7 <b>131 (5)</b> 111:11;113:15; 294:11,12,17 <b>13-12 (1)</b> 4:4 <b>140 (1)</b> 295:10 <b>1400 (1)</b> 56:11 <b>144 (3)</b> 37:10,14,15 <b>1467 (3)</b> 56:3,6;65:21 <b>147.4 (4)</b> 295:16,17;296:3,4 <b>1494 (1)</b> 53:6 <b>15 (15)</b> 52:15,19;53:9,10,24; 54:4,15,16,19,23;55:7, 17;58:21;80:13;298:20 <b>150 (2)</b> 295:17;302:20 <b>153 (2)</b> 158:25;302:10 <b>156 (2)</b> 295:19;296:5 <b>15a (2)</b> 18:23;19:9 <b>16 (54)</b> 4:7;6:12;26:8,15,17; 27:14;29:14;30:15; 34:20,24;35:5,9,11; 36:2,9;37:4;38:17; 41:15;45:20;46:15; 47:4,7,10;48:15,16; 49:15;51:8;52:11,16, 24;56:2,10;62:12; 64:18;65:20;69:16,17; 70:9,17;71:7,13,24;	72:19;73:5,11,13; 77:22;103:7;208:23; 209:21;211:12;212:9, 10;213:17 <b>16th (1)</b> 137:2 <b>17 (3)</b> 98:20,24;262:21 <b>1-7 (1)</b> 22:25 <b>173 (3)</b> 261:25;262:24;263:2 <b>175th (12)</b> 57:16;58:4,24;59:2; 60:17,19;61:4,7,9; 63:13,21,22 <b>17th (2)</b> 261:22;262:20 <b>18 (4)</b> 21:17;76:14;82:21, 25 <b>1800 (1)</b> 56:11 <b>181 (1)</b> 136:19 <b>1899 (3)</b> 56:3,6;65:21 <b>18-car (1)</b> 68:10 <b>190 (1)</b> 300:10 <b>190,000 (1)</b> 158:24 <b>190.4 (1)</b> 300:10 <b>190.6 (1)</b> 300:11 <b>195 (1)</b> 263:14 <b>196 (2)</b> 263:14,18 <b>1st (9)</b> 168:18;209:6; 215:22;223:25;233:4; 242:4;249:8,25;280:20	47:4;50:2,4,11,14,21, 23;52:11;58:21;62:12; 64:18;69:17;71:12; 83:10,14,16;97:22; 107:24;108:9;264:9; 288:15;297:17;298:20, 23 <b>200 (1)</b> 239:18 <b>2008 (1)</b> 247:9 <b>2009 (6)</b> 91:24;92:10;93:14; 94:5;98:16;307:6 <b>2010 (12)</b> 141:3;142:14,17,24; 161:9;177:13;208:16, 17,25,25;241:19; 276:14 <b>2011 (18)</b> 98:16;113:5;178:19; 200:20;209:6;215:22; 223:25;224:16;233:4, 6;242:4;244:11;249:8, 25;250:9,17;280:20; 284:2 <b>2012 (27)</b> 19:11;20:6,19;21:7; 23:1;31:25;47:13; 91:24;92:12;93:14; 96:17,18,21;105:14; 108:24;142:14,17,24; 175:10;176:22,23; 178:11,14,19;183:6; 188:1;257:21 <b>2013 (26)</b> 4:12;15:23;16:8; 21:9;94:3,5;96:19,22; 104:25;112:1;113:4; 115:9;132:19;146:15; 147:4,11;148:8; 150:22;151:2;157:4; 177:24;180:18;183:10; 187:23;200:20;261:22 <b>2014 (12)</b> 4:13;6:5,11,11; 20:20;21:6;74:1;77:11; 115:15;156:22;157:1,5 <b>206 (1)</b> 117:1 <b>208 (2)</b> 57:25;58:8 <b>20th (5)</b> 267:6;268:24;269:1; 274:10;275:4 <b>21 (3)</b> 97:22;245:13;249:19 <b>2174 (2)</b> 155:22;156:5 <b>22 (3)</b> 245:14;249:19;303:6 <b>224 (3)</b> 114:19,20,24	<b>225 (4)</b> 114:20,25;116:4,7 <b>22nd (6)</b> 274:1,2,14,19;275:4, 4 <b>23 (10)</b> 59:9,17;60:6,12; 61:16,19;65:12,14,21; 303:6 <b>230 (2)</b> 290:25;292:20 <b>24 (8)</b> 15:4;21:13,13,18,20; 85:23;173:12;263:2 <b>24-hour (11)</b> 21:6,12;147:25; 150:16;168:8;170:18, 25;173:14;183:2; 257:11;258:20 <b>25 (12)</b> 56:11;287:9;289:25; 297:2,10,11,12,15,18; 298:1,2,22 <b>2500 (2)</b> 168:18;183:10 <b>26 (1)</b> 4:12 <b>27 (3)</b> 16:1;236:25;239:3 <b>28 (1)</b> 236:16 <b>280 (4)</b> 45:25;46:8,25;48:23 <b>28236 (1)</b> 281:5 <b>285 (6)</b> 206:14;212:16; 222:8;225:21;280:12; 283:17 <b>28th (2)</b> 208:17,25 <b>296 (3)</b> 35:9;45:25;46:7 <b>29th (1)</b> 208:16
		<b>2</b>		<b>3</b>
		<b>2 (25)</b> 49:4;68:19;97:16; 153:9;168:8;169:20, 22;187:3;188:3; 195:17;205:24;206:3; 225:24;226:19;282:11, 13,22,24;283:4,11,19; 287:16;292:23;294:4; 295:7 <b>2/17/2012 (1)</b> 276:13 <b>20 (36)</b> 21:2,8,11,18,20; 23:25;25:3;26:8,17; 27:14;34:20;46:15;	<b>206 (1)</b> 117:1 <b>208 (2)</b> 57:25;58:8 <b>20th (5)</b> 267:6;268:24;269:1; 274:10;275:4 <b>21 (3)</b> 97:22;245:13;249:19 <b>2174 (2)</b> 155:22;156:5 <b>22 (3)</b> 245:14;249:19;303:6 <b>224 (3)</b> 114:19,20,24	<b>3 (24)</b> 44:3;49:4;162:17; 163:23;169:17;174:1; 195:18;206:8,11,19; 207:12;226:1,19,25; 229:9;243:15;282:15; 283:1,10;284:23,25; 285:1;292:24;297:6 <b>3.1.2c (1)</b> 211:14 <b>3.2.2 (9)</b> 212:6;213:20; 217:16;219:15;221:2; 222:6,6;228:13;231:8 <b>3.2.2a (2)</b>

211:14;219:3 <b>3.2.2e (3)</b> 214:13;224:21;233:7 <b>30 (5)</b> 56:11;71:12;190:8; 252:10;291:11 <b>32 (4)</b> 21:4;166:10,12; 187:24 <b>32,000 (1)</b> 158:24 <b>323 (1)</b> 163:10 <b>32nd (1)</b> 4:2 <b>338 (3)</b> 35:9;45:25;46:7 <b>340-page (1)</b> 278:20 <b>346 (2)</b> 150:24;163:10 <b>34th (6)</b> 132:19,23;142:25; 167:18;168:11,17 <b>350 (2)</b> 163:10;195:18 <b>352 (1)</b> 168:15 <b>355 (2)</b> 167:20;168:18 <b>358 (1)</b> 168:19 <b>360 (1)</b> 166:13 <b>363 (4)</b> 45:24;46:8,25;48:23 <b>364 (2)</b> 150:24;151:1 <b>364a (1)</b> 15:22 <b>365 (2)</b> 163:20;200:10 <b>371 (1)</b> 52:3 <b>379 (2)</b> 34:24;41:14 <b>391 (7)</b> 209:15;210:10; 211:13;212:8,12; 221:19;228:7 <b>391a (9)</b> 208:15;209:14; 213:17;214:6,16,21,23; 218:9;221:18	<b>400 (1)</b> 243:15 <b>400-something (1)</b> 65:23 <b>407 (8)</b> 224:8;242:11; 244:18,20;247:3,11,12; 250:25 <b>408 (1)</b> 247:13 <b>40-meter (7)</b> 290:2,12,21;292:22; 296:14,22;297:3 <b>420 (3)</b> 167:18;168:11,17 <b>43 (2)</b> 22:1;26:22 <b>45 (3)</b> 22:24;303:5;305:7 <b>4-5 (1)</b> 108:12 <b>46 (8)</b> 26:2,7,12;27:3,6; 154:5,15,15 <b>466 (2)</b> 205:1;249:19 <b>48 (1)</b> 14:10 <b>485 (1)</b> 210:10 <b>4-9 (1)</b> 108:12	6:10;162:13 <b>561 (1)</b> 6:12 <b>562 (2)</b> 5:22;6:12 <b>563 (2)</b> 88:22,24 <b>564 (11)</b> 145:15,17;151:2,21, 22;152:2,12,19,24; 153:2;160:23 <b>564a (7)</b> 91:2,5,9,13;160:18, 25;161:1 <b>564b (8)</b> 91:16;92:4,20,21; 93:16;128:15;142:22; 159:10 <b>564c (1)</b> 94:7 <b>564d (5)</b> 94:10,17,23;131:4; 132:13 <b>564e (4)</b> 95:15,20;188:20,24 <b>565 (19)</b> 146:20;147:19; 150:5;151:6,19;152:3, 11,19,23;153:1,23; 160:24;162:8,9,15; 165:24,25;167:20; 168:17 <b>565a (5)</b> 148:5,6;150:14; 166:1;168:8 <b>565b (2)</b> 148:5,16 <b>565c (2)</b> 149:4,6 <b>565d (1)</b> 150:10 <b>56a (1)</b> 96:25 <b>573 (1)</b> 40:23 <b>58 (1)</b> 154:15 <b>593 (5)</b> 38:19;40:17,19,22; 41:14 <b>59-G-2.06 (1)</b> 4:6	49:14 <b>67 (3)</b> 51:16,21;52:4 <b>68230 (1)</b> 260:10 <b>68232 (2)</b> 217:10;222:7 <b>68236 (2)</b> 225:21;229:5 <b>68246 (1)</b> 299:15 <b>68247 (1)</b> 305:24 <b>6th (1)</b> 307:5	205:24;225:25 <b>824 (8)</b> 34:24;35:11;41:17; 42:2,5;46:1,18;49:14 <b>83 (8)</b> 110:5;111:10,14,19; 112:1,16,25;113:5 <b>8500 (1)</b> 155:25 <b>86 (3)</b> 155:2,5;302:9 <b>8600 (1)</b> 155:25 <b>8760 (1)</b> 156:5
	<b>5</b>		<b>7</b>	<b>9</b>
	<b>5 (3)</b> 27:20;151:7;308:1 <b>5:01 (1)</b> 311:20 <b>50 (26)</b> 166:21;190:8; 195:18;200:11;287:10; 288:14;289:13,19; 290:6;300:5,18; 301:10,18,22;302:19, 21;303:5,10,23,24; 305:9;306:19,21,24; 307:11,15 <b>500 (3)</b> 200:7,9,11 <b>52 (1)</b> 57:20 <b>556 (2)</b> 5:22,22 <b>557 (3)</b> 6:1;8:18;14:4 <b>558 (1)</b> 6:4 <b>559 (1)</b> 6:6 <b>559a (1)</b> 6:8 <b>560 (2)</b>	<b>565a (5)</b> 148:5,6;150:14; 166:1;168:8 <b>565b (2)</b> 148:5,16 <b>565c (2)</b> 149:4,6 <b>565d (1)</b> 150:10 <b>56a (1)</b> 96:25 <b>573 (1)</b> 40:23 <b>58 (1)</b> 154:15 <b>593 (5)</b> 38:19;40:17,19,22; 41:14 <b>59-G-2.06 (1)</b> 4:6	<b>7 (14)</b> 44:5,17;45:10;77:3; 242:10;244:13,14,18; 247:3,10;250:19,21,25; 251:4 <b>7.8 (1)</b> 180:20 <b>7/31/12 (1)</b> 292:21 <b>7:00 (3)</b> 58:18;60:9;76:25 <b>70 (4)</b> 30:24,25;31:6;290:6 <b>72 (4)</b> 82:13,19,25;84:7 <b>720 (3)</b> 83:3;84:6,8 <b>73 (2)</b> 111:8,14 <b>75 (4)</b> 225:24;241:2; 243:12;300:25 <b>76 (1)</b> 303:3 <b>783 (7)</b> 61:18;62:3,6,17,24; 64:13;65:8 <b>79 (3)</b> 35:9;45:25;46:7	<b>9.1.3 (2)</b> 299:13;301:5 <b>9.1.3b (2)</b> 305:23;309:19 <b>9.3.1b (1)</b> 308:12 <b>9.5 (1)</b> 180:18 <b>9:00 (1)</b> 76:25 <b>9:30 (5)</b> 4:14;37:7,16;38:18; 311:16 <b>90 (1)</b> 288:21 <b>92 (4)</b> 196:18,21;197:14; 302:9 <b>94 (2)</b> 51:20;52:4 <b>96 (1)</b> 84:25 <b>960 (1)</b> 84:25 <b>97 (2)</b> 36:19,23 <b>98 (1)</b> 74:16 <b>98th (14)</b> 103:19,25;106:10, 10;107:2;112:2,18; 116:11;154:4,19,20; 281:12,20;301:1
<b>4</b>		<b>6</b>	<b>8</b>	
<b>4 (3)</b> 25:2;40:24;41:1 <b>40 (11)</b> 20:19,20;23:24; 71:12;190:8;290:7,19; 293:2,8,13;294:10		<b>6 (1)</b> 6:5 <b>631 (1)</b> 4:9 <b>639 (5)</b> 61:19;65:5;76:11,24; 77:3 <b>643 (1)</b>	<b>8 (5)</b> 6:6;42:3;111:23; 145:21;250:21 <b>8.2 (1)</b> 180:20 <b>8.3 (2)</b> 175:12,13 <b>8.5 (2)</b> 175:11,13 <b>8:30 (4)</b> 37:7,8,16;38:17 <b>80 (5)</b> 51:20,21;52:4;	