

SOAH DOCKET NO. 582-15-2082

TCEQ DOCKET NO. 2015-0069-MSW

APPLICATION OF)	BEFORE THE STATE OFFICE
130 ENVIRONMENTAL PARK,)	
LLC, FOR PROPOSED)	OF
PERMIT NO. 2383)	
)	ADMINISTRATIVE HEARINGS

HEARING ON THE MERITS

Thursday, August 25, 2016

BE IT REMEMBERED THAT at 9:17 a.m., on Thursday, the 25th day of August 2016, the above-entitled matter came on for hearing at the State Office of Administrative Hearings, William P. Clements, Jr., Building, 300 West 15th Street, Room 404, Austin, Texas, before KERRIE JO QUALTROUGH and CASEY BELL, Administrative Law Judges, and the following proceedings were reported by Dalia F. Inman and Jodi Cardenas, Certified Shorthand Reporters.

P R O C E E D I N G S

THURSDAY, AUGUST 25, 2016

(9:17 a.m.)

JUDGE QUALTROUGH: All right. It is August 25th, 2016. It is 9:15 a.m., in SOAH Docket No. 582-15-2082, TCEQ Docket No. 2015-0069-MSW. We are reconvening this hearing. And let's do some housekeeping matters on the record.

It's my understanding that Protestants TJFA and EPICC did not intend to submit Exhibits 12 through 15 to be marked, that those exhibits were not going to be offered. And I just wanted to clarify that since they weren't intended to be submitted, they will not be listed on the table of contents. Is that correct, Mr. Allmon?

MR. ALLMON: Yes, Your Honor, that is our intent.

JUDGE QUALTROUGH: All right. Thank you very much. With that on the record and clarified, we will begin -- or I guess we'll start again with the cross-examination of Mr. Odil.

MR. ALLMON: Yes.

1 PRESENTATION ON BEHALF OF EXECUTIVE DIRECTOR (CONTINUED)

2 STEVE ODIL,

3 having been previously duly sworn, continued to testify
4 as follows:

5 CROSS-EXAMINATION

6 BY MR. ALLMON:

7 Q Good morning, Mr. Odil.

8 A Good morning.

9 Q As you reviewed this application, how did you
10 treat TCEQ's authority over non-jurisdictional wetlands?
11 May be I'll say, as you reviewed this application, did
12 you consider TCEQ to have authority over
13 non-jurisdictional wetlands?

14 A I did consider that there can be wetlands
15 within a permit boundary that are not jurisdictional.

16 Q And, as we say jurisdictional versus
17 non-jurisdictional, does that have a particular meaning
18 to you?

19 A Essentially whether we have any authority to
20 expect anything from them.

21 Q Let me ask you to assume when we're talking
22 about jurisdictional wetlands, we're referring to
23 wetlands over which the Corps of Engineers has
24 jurisdiction --

25 A Certainly.

1 Q -- whereas non-jurisdictional wetlands are
2 wetlands over which the Corps of Engineers does not have
3 a jurisdiction.

4 A All right.

5 Q Are you familiar that there's wetlands
6 delineations done for the Corps of Engineers where those
7 are the terms used?

8 A Yes.

9 Q So with the understanding of those terms, did
10 you make any distinction in how jurisdictional wetlands
11 are treated in comparison to non-jurisdictional
12 wetlands?

13 A I did not.

14 Q Did you apply certain rules to jurisdictional
15 wetlands, while not applying those same rules to
16 non-jurisdictional wetlands?

17 A I would say no, because I didn't -- I didn't
18 delineate it, and I didn't -- I left final authority
19 over the delineation to the Corps.

20 Q In this case, would non-jurisdictional wetlands
21 be affected by the design?

22 A Yes.

23 Q And so it's your opinion that to the degree --
24 it's your opinion today that to the degree those
25 non-jurisdictional wetlands are impacted by the design,

1 that they should be regulated in the same manner as
2 jurisdictional wetlands?

3 A No.

4 Q And why do you make that distinction?

5 A Well, I'm not sure I'm making any distinction
6 on that. What I'm looking for in accordance with the
7 rule is that a qualified individual went out and
8 performed a delineation and that they presented their
9 findings to the Corps. The Corps eventually agreed with
10 their findings, and there was no need for further
11 action. But that's -- as an engineer, I don't know much
12 about wetlands.

13 Q Can you turn with me to -- do you have a copy
14 of the rules up there available?

15 A Yes.

16 Q Could you turn with me to 30TAC Section
17 330.553?

18 A Yes.

19 Q Give me just a second.

20 And I would refer you specifically to
21 330.553(b)1 through (b)5.

22 A Yes.

23 Q And did you make a distinction in how this rule
24 would apply to jurisdictional wetlands versus
25 non-jurisdictional wetlands?

1 A No.

2 Q So today, is it your opinion that 330.553(b)
3 should apply equally to jurisdictional and
4 non-jurisdictional wetlands?

5 A I have no opinion on that.

6 Q But as you processed this permit, did you make
7 a distinction between how this rule applies to
8 jurisdictional versus non-jurisdictional wetlands?

9 A No.

10 Q Generally, has the MSW program treated
11 jurisdictional wetlands differently than
12 non-jurisdictional wetlands?

13 A Not to my knowledge. Again, we are expecting
14 the assessment to be provided and that information to be
15 coordinated to the Corps, and the Corps' conclusions we
16 will expect to be met.

17 Q So to the degree that TCEQ rules have
18 requirements or prohibitions related to wetlands, is it
19 your opinion that those requirements and prohibitions
20 apply equally to jurisdictional and non-jurisdictional
21 wetlands?

22 A It's my opinion that whatever the Corps decides
23 is meeting the Rule. I'm making no distinction between
24 jurisdictional and non-jurisdictional.

25 Q So when you say "the Corps," are you intending

1 that if the Corps defines something as jurisdictional
2 wetlands, then that is what you consider a wetland?

3 A I'm not making that distinction. I'm relying
4 on their conclusions and how they make them. As a
5 chemical engineer, I have little knowledge to trump
6 them.

7 Q And I'm not -- well, let me put it this way.
8 Could you turn to the TCEQ definition of
9 wetlands for the MSW program, and that's 330.3(178).

10 To be clear, 330.3(178).

11 A I'm there.

12 Q At that point, is wetlands for the MSW rules
13 defined by reference to Chapter 307?

14 A It is.

15 Q Do you have Chapter 307 up there?

16 A I certainly didn't bring it.

17 Q Do you have it before you?

18 A I believe it's here.

19 Q Could you turn to 307.3(81).

20 I know it's rather long, but is the
21 definition of wetlands set forth at 307.3(81) --

22 A I don't have it. This Part 3 volume of the
23 Texas Administrative Code starts at 319.

24 Q Let me go ahead and bring that up to you.

25 A Okay.

1 MR. ALLMON: May I approach, Your Honor?

2 JUDGE QUALTROUGH: Yes, you may.

3 Q (BY MR. ALLMON) We're not going to need to go
4 through the whole thing.

5 A Okay.

6 Q So do you now have before you 30TAC Section
7 307.3(81)?

8 A Yes.

9 Q And what is set forth in this provision of the
10 rules?

11 A A definition for wetland.

12 Q Is any reference made in this definition to
13 whether a wetland is jurisdictional or
14 non-jurisdictional under federal law? I'll give you a
15 second to review it.

16 A None that I see.

17 Q Okay. And this the definition is set forth in
18 the Texas water quality standards?

19 A Surface Water Quality Standards, yes.

20 Q I'm going to return to my seat.

21 Have you made any inquiry as to how this
22 definition is implied in implementing the Texas water
23 quality standards?

24 A No.

25 Q So have you made any determination as to

1 whether, in water quality permitting, a distinction is
2 made between jurisdictional and non-jurisdictional
3 wetlands?

4 A No.

5 Q Would the agency apply such a definition
6 uniformly across programs?

7 A I don't know.

8 Q Do you know of any reason why the definition
9 should not be applied uniformly across programs?

10 A No.

11 Q Could you turn with me -- and you can put --
12 turn with me to 130EP-1I, Page 17.

13 A The Part 1 form?

14 Q Yes, Part 1 form.

15 A I'm there.

16 Q Who is the operator in this case?

17 A 130 Environmental Park, LLC.

18 Q And is that the Applicant? Would that be who
19 we would consider the Applicant for this permit?

20 A Yes.

21 Q Are you familiar with Green Group Holdings?

22 A I've heard the reference to them but not beyond
23 that.

24 Q Did you make any inquiry into the ownership of
25 Green Group Holdings of 130 Environmental Park, LLC?

1 A Okay. That's two different entities?

2 Q Yes.

3 Did you make any inquiry as to the
4 business relationship between 130 Environmental Park,
5 LLC, and a group by the name of Green Group Holdings?

6 A Not specifically, no.

7 Q Are you aware that -- well, okay.

8 The alternate daily cover at this facility
9 has been discussed. Is that correct?

10 A That's correct.

11 Q What is the process by which a landfill would
12 obtain authorization for alternate daily cover, say if
13 this facility were to go forward?

14 A If the permit were issued, a landfill could
15 submit a temporary authorization request. They would
16 need to do two of these, because each is six months.
17 During that year, they would provide reports explaining
18 whether the materials were effective in -- and it's in
19 the rule -- but fire prevention, odor, vectors, control
20 of those factors that are expected to be protected by
21 daily cover. And at the end of that period, they can
22 apply for a notice modification to make that part of
23 their permit.

24 Q In that process, is there any opportunity for a
25 contested case hearing?

1 A No.

2 Q In that process, is there any formal comment
3 period?

4 A There is a comment period on -- on a notice
5 modification.

6 Q Okay. Is any response to comments required as
7 part of that process?

8 A We do them. We typically do them. It's an
9 informal process. A formal Executive Director's
10 response to a public comment document is typically not
11 generated. It's -- it's a -- it's an informal process,
12 but we typically do respond. And there's some variety
13 in the response procedure. I've actually had cases
14 where I had three comments, and I wrote a response
15 letter to each of the commenters.

16 Q Okay.

17 MR. ALLMON: Your Honor, I pass the
18 witness.

19 JUDGE QUALTROUGH: All right. I believe
20 Caldwell County is next.

21 CROSS-EXAMINATION

22 BY MR. MAGEE:

23 Q Good morning.

24 A Good morning.

25 Q The good thing about a break overnight is, it's

1 either scary because I can go home and think of a lot of
2 questions or I can cross a lot of questions off. In
3 your case, it's probably the latter. I crossed a lot of
4 questions off.

5 A I'm happy to hear that. Thank you.

6 Q I think most of my questions got answered
7 yesterday. But I wanted to ask you a couple of more
8 questions about access road. And on Exhibit 8, your
9 Exhibit 8 -- and I have numbered them sequentially, so
10 I'm going to refer to it as Page 72, but it's also
11 Page 11 of the draft permit.

12 A That's the version without -- the no-watermark
13 version?

14 JUDGE QUALTROUGH: Is there another
15 version?

16 MR. MAGEE: Yeah, it doesn't have a
17 watermark version.

18 THE WITNESS: I mentioned this yesterday.
19 It's the same document, but one has the watermark and
20 one doesn't. I shouldn't have even asked which one it
21 was, because they are the same. But it made sense that
22 it was at the back. It will get me to the page he's on
23 quicker.

24 JUDGE QUALTROUGH: But is there a
25 watermark version in the record?

1 THE WITNESS: Yes, it's part of that same
2 Exhibit 8.

3 MR. VARGAS: It's the first one, I think.

4 MR. MAGEE: And I have that, when I
5 numbered them sequentially at 35 through 46, but this is
6 at the end of that exhibit.

7 THE WITNESS: This is a package we send
8 down to the chief clerk's office, and it has a number of
9 things, including a copy of the technically complete
10 letter, which has the watermark. And then should the
11 permit be issued, they need a clean version, and we
12 provide it as well.

13 JUDGE QUALTROUGH: Other than the
14 watermark, is there any difference between the two draft
15 permits in Exhibit 8?

16 THE WITNESS: No. I sincerely hope not.
17 There shouldn't be.

18 MR. MAGEE: I'm referring to the
19 non-watermark version.

20 JUDGE QUALTROUGH: And that comes after
21 the watermark?

22 THE WITNESS: It's nearly at the end.

23 MR. MAGEE: It is actually like four pages
24 at the end. It's Page 11.

25 JUDGE QUALTROUGH: Oh, then, I need to

1 change this. Page 11 of the non-watermarked version,
2 okay.

3 MR. MAGEE: If they're numbered
4 sequentially, I think it's going to wind up being
5 Page 72.

6 THE WITNESS: Of, probably, 75.

7 MR. MAGEE: Right.

8 JUDGE QUALTROUGH: All right. Y'all got
9 to get that fixed. Okay.

10 A I'm there.

11 Q (BY MR. MAGEE) Okay. On No. 11, that's the
12 requirement that the permittee retain entry onto the
13 site until the end of post-closure care period that's
14 prescribed in the rules. Correct?

15 A Which provision are you on?

16 Q Number L.

17 A Yes.

18 Q And then you have the special provision under A
19 about the permittee providing to the Executive Director
20 the floodplain development permit from the city, county,
21 whoever. Right?

22 A I tried to be as vague as possible.

23 Q Okay. Did you go pull any county regulations
24 concerning permits that they may be required to obtain
25 from the County?

1 A No. That's why I left it in the generic
2 language of the rule.

3 Q And the only one that you're requiring as a
4 special permit is just the floodplain portion. Correct?

5 A Yes. I forget the rule off the top of my head,
6 but it specifically refers to the...

7 Q I think that rule, probably, is in the book in
8 front of you, if you look at 330.63.

9 A I brought my own rules. They're easier to
10 read.

11 Q Okay.

12 A Okay. I'm in 63.

13 Q Little C.

14 A Yes.

15 Q I think it's No. 2, big D, 2I.

16 A Yes.

17 Q Okay. So that's what is that special provision
18 is referring to?

19 A Yes.

20 Q When we're referring to 330.63 Part C, do these
21 requirements concerning the facility surface water
22 drainage report, do they apply to portions of access
23 roads that are within the permit boundary?

24 A Certainly.

25 Q Okay. And that's what the rule is referring to

1 as the facility. Right?

2 A The facility is the units and appurtenances
3 enclosed by the permit boundary.

4 Q Okay. So does this rule apply to that one-mile
5 stretch of access road that is outside the permit
6 boundary?

7 A The drainage calculations are primarily based
8 at the permit boundary, as we discussed yesterday.

9 Q Okay.

10 A The initial point of comparisons are at the
11 permit boundary. We've had this discussion a bit
12 yesterday that if a -- we have allowed roads to be
13 outside, and there are other rules that require
14 activities outside of the permit boundary. If they're
15 within the permit, there is -- I think it's enforceable.
16 Again, I don't work in enforcement, but I don't think
17 they would have any trouble enforcing that.

18 Q So inside the permit boundary is enforceable;
19 outside the permit boundary, you're unsure?

20 A I would say it depends on what the permit says.
21 If there are things provided as part of the permit, then
22 they are still enforceable outside of the permit
23 boundary.

24 Q So where in the draft permit does it address
25 the -- that one-mile stretch of accesses road that's not

1 inside the permit boundary?

2 A When you're referring to the permit, you mean
3 this document that we're looking at right now?

4 Q Well, the draft permit. Right.

5 A The draft permit, if you look on Page 12, says
6 Parts 1 through 4 of the permit application. So the
7 entire application is part of the permit by reference.
8 So even though that road off-site may not be
9 specifically addressed in the permit document, it is
10 still in the application and therefore is part of the
11 permit.

12 Q Okay. You would agree with me that the TCEQ
13 rules, just in general, there's provisions of where, as
14 part of an application, they talk about closure of a
15 landfill, closure duties and responsibility --
16 post-closure duties and responsibilities, those types of
17 activities. Right?

18 A Certainly.

19 Q And then there's even rules in the Texas
20 Administrative Code concerning municipal solid waste
21 fill sites that makes the assumption that if some kind
22 of event occurs for 130 Environmental Park, the
23 Executive Director may have to assume legal
24 responsibility over the closure, post-closure, and
25 corrective actions that may be needed at that site?

1 A And that's why we require closure costs,
2 post-closure costs and --

3 Q Right. Those financial obligations --

4 A Yes.

5 Q -- to ensure that if something happens to them,
6 then the Executive Director takes over and takes control
7 of that. Right?

8 A Hires someone to do that.

9 Q Okay. So if we look at 330.67...

10 A Okay.

11 Q I am looking at Subsection A, the very first
12 sentence. Can you read that for us.

13 A [As read] It is the responsibility of an owner
14 or operator to possess or acquire a sufficient interest
15 in or right to use the surface estate of the property
16 for which the permit is issued, including the access
17 route.

18 Q So if this event occurs and the ED has to hire
19 someone and take control in one of these periods, you
20 know, the closure or post-closure or corrective action,
21 and you've issued a permit similar to the draft permit,
22 how does -- what authority in the rules is given to that
23 one-mile stretch of access road that's not within a
24 contained permit boundary but is now on private property
25 somewhere else?

1 A We're getting into the awkwardness of how
2 specifically the enforcement people would address
3 certain issues, and I'm not sure how well I can answer
4 that.

5 But in general, if someone walked away, it
6 would be under -- there would be a permit that would
7 exist that would include that access. The idea that the
8 doughnut property that surrounds the permit boundary
9 could somehow be sold and the access lost, I don't think
10 can occur. If that were sold, then the permit would
11 have to retain an access. That access would still
12 exist, an easement of some sort for that access route.

13 Q So if the property that crosses that access
14 road right now, there's no rule that you can point to,
15 other than just it's included right here and listed on
16 Page 12 as Parts 1 through 4, that secure the ED access
17 into that site, other than just the rules we went over.
18 Correct?

19 A Whatever changes are made to the permit, the --
20 the access would have to be addressed. So on whatever
21 day they walk away, that access should still exist.

22 Q And that one-mile stretch just isn't in the
23 permit. Right?

24 A I'd say it's still in the permit. It's not in
25 the permit boundary.

1 Q Okay.

2 MR. MAGEE: I don't think I have any
3 further questions.

4 JUDGE QUALTROUGH: All right. So I
5 believe we're back at redirect.

6 MR. VARGAS: Just one.

7 REDIRECT EXAMINATION

8 BY MR. VARGAS:

9 Q So staying on the draft permit, can you just
10 tell me what a special provision is, briefly?

11 A The standard provisions -- the standard permit
12 provisions are all just that. They're template
13 language, they're addressing things that go into every
14 permit, they're bolstering arguments for things that
15 you've probably told us you're doing somewhere else
16 anyway, but they're making it very clear in the permit
17 document.

18 Special provisions are an opportunity for
19 staff to address things. Not just staff. The
20 commissioners can direct us to add things through
21 special provisions. This is an opportunity for other
22 things to be added based on the specifics of the
23 application. For example, the second special provision,
24 Special Provision B, I tend to put into my permit, my
25 draft permits, just to act as a reminder that at the

1 preopening meeting, I want the regional -- the
2 enforcement people to be aware that there were road
3 improvements required and that before waste is accepted,
4 those road improvements need to have been made. You
5 shouldn't start bringing all the trucks in until the
6 roads have been improved to TxDOT's concerns.

7 In A, it has been fairly common in these
8 coordination steps where other agencies don't
9 necessarily follow the same time frames we do. To
10 address these to get to the end, again, as we discussed
11 yesterday, I have a tendency to write an NOD on the
12 first one that says, you know, you've demonstrated that
13 you contacted this agency, we await their response. And
14 I just keep repeating it until I get to the end.

15 And when it becomes the only thing I have
16 left, I go to my managers and I say, This is all I have
17 left; do you want me to address it through a special
18 provision or shall I keep NOD'ing it? And typically,
19 they say, address it through a special provision. So
20 this addresses that coordination step and makes sure
21 that before -- before -- in this case, before physical
22 construction could commence, because I don't want people
23 digging big holes in floods if the flood people have an
24 issue -- this makes sure that that rule has been
25 addressed.

1 Q So just to be clear, is this unusual at all?

2 A It's not.

3 MR. VARGAS: Okay. Pass the witness.

4 JUDGE QUALTROUGH: Very limited recross.

5 I guess it would be the Applicant.

6 MR. RYAN: Thank you, Your Honor.

7 RECROSS-EXAMINATION

8 BY MR. RYAN:

9 Q Mr. Odil, in reference to a special provision
10 like this that addresses approvals from entities other
11 than TCEQ, have those types of special provisions been
12 put in municipal solid waste landfill permits for things
13 like 404 permits from the Corps of Engineers for the use
14 of wetlands?

15 A I think that's where it started, because their
16 time frame is -- can often be longer than ours.

17 Q Okay. And how about for conditional letters of
18 map revision or map amendment from FEMA related to
19 floodplain changes?

20 A I haven't had that, but it could certainly
21 occur.

22 Q Okay. How about with regard to local approvals
23 for construction of levees, is that the sort of thing
24 that can be dealt with by way of a special provision?

25 A It could.

1 Q And in this particular case, a floodplain
2 development permit?

3 A (Nods head.)

4 Q Are you aware of instances in which that has
5 been dealt with by way of a special provision in the
6 past?

7 A I'm not aware of specific example.

8 Q Okay. And --

9 A But it's consistent with these others.

10 Q You referred to the process of discussing with
11 your managers handling one of these other agency
12 approvals by way of a special provisions. Did you do
13 that in this case?

14 A I did.

15 Q Thank you.

16 MR. RYAN: Pass the witness.

17 JUDGE QUALTROUGH: Plum Creek.

18 MR. WILSON: No questions.

19 JUDGE QUALTROUGH: All right. OPIC?

20 MR. TUCKER: No questions.

21 JUDGE QUALTROUGH: TJFA?

22 MR. ALLMON: Just some brief questions.

23 RECROSS-EXAMINATION

24 BY MR. ALLMON:

25 Q Looking at the draft permit, we've got Special

1 Provision, for instance, A, where we're dealing with the
2 floodplain approval by the County.

3 A Yes.

4 Q Do the rules provide that be submitted with the
5 application?

6 A Yes.

7 Q And is there any rule that allows that to be
8 submitted after the application process?

9 A I know of no specific rule that allows it.
10 It's just become a fairly standard practice.

11 MR. ALLMON: Your Honor, that is all my
12 questions.

13 JUDGE QUALTROUGH: Caldwell County?

14 MR. MAGEE: No questions.

15 JUDGE QUALTROUGH: All right. Thank you.
16 You may step down.

17 Next witness.

18 MR. TATU: Yes. At this time, Executive
19 Director will call Arten Avakian.

20 JUDGE QUALTROUGH: I'll need to swear you
21 in.

22 (Witness sworn)

23 JUDGE QUALTROUGH: State your name for the
24 record.

25 THE WITNESS: My name is Arten Avakian.

1 JUDGE QUALTROUGH: Thank you. You may
2 proceed.

3 MR. TATU: Thank you, Judge.

4 ARTEN AVAKIAN,
5 having been first duly sworn, testified as follows:

6 DIRECT EXAMINATION

7 BY MR. TATU:

8 Q Mr. Avakian, do you have up there AA Exhibits 1
9 through 6?

10 A Yes.

11 Q And could you identify AA, Exhibit 1 please?

12 A AA-1 is my prefiled testimony.

13 Q Are there any corrections that need to be made
14 to AA1?

15 A No.

16 Q Could you please identify AA-2 through AA-6
17 this time?

18 A Yes. AA-2 is my résumé.

19 AA-3 is a Rule, Title 16, Chapter 76,
20 Section 76.72 regarding well drilling.

21 And from the same chapter, AA-4 is from
22 the same chapter. It's Rule 76.104, also about well
23 drilling.

24 AA-5 is our municipal solid waste permits
25 internal procedure for reviewing soil boring plans.

1 And AA-6 is a copy of Texas Water
2 Development Board Report 345, Aquifers of Texas.

3 Q Thank you.

4 Now, with regard to your prefiled
5 testimony in AA-1, if I were to ask you the same
6 questions that are contained in this prefiled testimony
7 today, would your answers be the same?

8 A Yes.

9 MR. TATU: Your Honors, at this time
10 Executive Director would offer ED-AA-1 through ED-AA-6
11 into the record.

12 JUDGE QUALTROUGH: Any objection?

13 MR. RYAN: No.

14 JUDGE QUALTROUGH: All right. Then those
15 exhibits -- AA-1 through AA-6, those are admitted.

16 (Exhibit Executive Director Nos. ED-AA-1
17 through ED-AA-6 admitted)

18 MR. TATU: Pass the witness.

19 JUDGE QUALTROUGH: Plum Creek?

20 MR. WILSON: No questions, Your Honor.

21 JUDGE QUALTROUGH: Applicant?

22 MR. RYAN: Thank you, Your Honor.

23 CROSS-EXAMINATION

24 BY MR. RYAN:

25 Q Good morning, Mr. Avakian.

1 A Good morning.

2 Q Do you have your prefiled testimony in front of
3 you there, Exhibit AA-1?

4 A Yes.

5 Q Would you turn to Page 3, and there's a
6 question on Line 18 about the portions of the
7 application that you reviewed. Correct?

8 A Yes.

9 Q And then you list those beginning on Line 20
10 and continuing over through Line 9 on Page 4. Right?

11 A Yes.

12 Q Does that list correctly identify the portions
13 of the application for which you were responsible in
14 terms of the review?

15 A Yes.

16 Q So with the exception of the landfill gas
17 management plan, the last thing included on that list,
18 would it be fair to describe the portions that you
19 reviewed as being those that relate to geology and
20 hydrogeology?

21 A I think so.

22 Q Now would you turn back to the last page of
23 your prefiled testimony, Page 12 of Exhibit ED-AA-1.
24 And the first question and answer there set out your
25 conclusions and opinions regarding the review that you

1 conducted. Is that right?

2 A Yes.

3 Q And is it your opinion that the information
4 provided in the permit application and the March 2015
5 and May 2016 supplements complies with the requirements
6 of the MSW rules regarding geology and hydrogeology?

7 A I think it would be -- it would be more correct
8 if I clarified that the May 2016 supplement was
9 submitted after we had already handed off jurisdiction
10 of the application. And so technically, it's not
11 available to me to decide whether or not it complies. I
12 did review it, and I didn't see any different
13 information, so that's why that I said.

14 Q Okay. So the initial opinions that you formed
15 based on your review during the technical review process
16 were based on the technically complete application
17 with -- well, based on the technically complete
18 application?

19 A And the March 2015 supplement.

20 Q Okay. And based on that review, you concluded
21 that the application meets the requirements of the MSW
22 rules regarding geology and hydrogeology?

23 A Yes. Again, I would clarify that we had
24 already made the technically complete determination
25 before the March 2015 supplement. That March 2015

1 supplement clarified some information that appeared in
2 the Applicant's submission of what they call a
3 technically complete copy after we did the declaration,
4 and in that technically complete copy, there was some
5 information that had been gathered but had been omitted
6 from the version that we reviewed before we made our
7 declaration.

8 Q Okay. And that information was included in
9 that March 2015 supplement?

10 A Yes.

11 Q And then in the second half of that sentence
12 that starts on Line 5 of Page 12 of Exhibit AA-1D, you
13 refer to monitoring systems and other features whose
14 designs depend on the geologic and hydrogeologic
15 characteristics of the site. Would that include the
16 groundwater monitoring and landfill gas monitoring
17 systems?

18 A Yes. The geology and hydrogeology are
19 considered as -- need to be considered in the design of
20 a landfill gas monitoring system.

21 Q And obviously also in connection with the
22 design of a groundwater monitoring system. Right?

23 A Yes.

24 Q Okay. And I think you testified earlier that
25 you have reviewed the May 2016 supplement, which

1 includes additional information relate to Attachments E
2 and F of the permit application. Is that correct?

3 A That sounds right.

4 Q And do I understand your testimony correctly
5 that you didn't see anything during your review of that
6 information that would change your opinions here?

7 A Yes. I think I said that earlier in my
8 testimony, prefiled.

9 Q Okay. Thank you.

10 MR. RYAN: I'll pass the witness.

11 JUDGE QUALTROUGH: All right. OPIC?

12 MR. TUCKER: No questions.

13 JUDGE QUALTROUGH: TJFA or Caldwell
14 County? Who wants to go first?

15 MR. MAGEE: You go.

16 JUDGE QUALTROUGH: All right. TJFA.

17 CROSS-EXAMINATION

18 BY MS. PERALES:

19 Q Good morning, Mr. Avakian. I have just a
20 couple of questions for you.

21 A Okay.

22 Q I want to start by asking you to refer to the
23 Applicant's Exhibit EP-4, which is in Volume 4.

24 And can you please turn to Page 45. Are
25 you there?

1 A Yes.

2 Q Can you identify this document.

3 A This is our letter approving the soil boring
4 plan.

5 Q Okay. And this is the letter that you signed
6 off on. Right?

7 A Yes.

8 Q Okay. Can you turn to Page 46, and at the top
9 of that letter, it states that if this -- if it's
10 necessary to modify this approved -- this approved plan,
11 referring to the soil boring plan, then another plan
12 detailing the proposed modifications must be submitted
13 for approval before implementing the modifications. Is
14 that right?

15 A Yes.

16 Q Do you recall ever seeing any modification or
17 revised soil boring plan submitted after your approval
18 letter?

19 A No.

20 Q Up there on the table, there should be a folder
21 that has Protestants' exhibits, and I'll ask you to look
22 for Protestants Exhibit 33. It might just be P-33.

23 MS. PERALES: May I approach, see if I can
24 help him find it?

25 JUDGE BELL: Yes.

1 MR. RYAN: Marisa, what --

2 MS. PERALES: P33.

3 Q (BY MS. PERALES) Okay. Do you have P33 in
4 front of you?

5 A I do now. Thank you.

6 Q And does this appear to be the soil boring plan
7 that was initially submitted by the Applicant in this
8 case?

9 A Yes.

10 Q And in this soil boring plan, if you turn to
11 Page 2, is it true that the Applicant proposed to
12 conduct in situ slug tests?

13 A Yes. It says that slug tests will be
14 conducted.

15 Q Okay. And on that same page, under "Drilling
16 Methods," is it your understanding that they -- that the
17 Applicant proposed to use hollow-stem augers or air or
18 mud rotary methods?

19 A Yes.

20 Q Do you know whether the Applicant conducted any
21 slug tests?

22 A I would need to go back and look at the
23 application to be sure. I'm --

24 Q Do you know whether you looked in the
25 application to determine whether they conducted any slug

1 tests as you were doing a technical review of the
2 application? Is that something you would've looked for?

3 A I would've looked for it, but I don't remember
4 what actually occurred during my review now.

5 Q Okay. Would you have also checked to make sure
6 that the drilling methods they used were consistent with
7 what was represented in the soil boring plan?

8 A Yes.

9 Q Do you recall doing that?

10 A Again, I assume I did.

11 Q Okay. And can you take a look at P34, or
12 Protestants 34. And if you turn to the second page,
13 does this appear to be a response by the Applicant to
14 the notice of deficiency regarding the soil boring plan?

15 A Yes, it does appear to be that.

16 Q Okay. And if you turn to the second page,
17 under No. 4, it states, "Please acknowledge in the soil
18 boring plan that the Applicant will seek approval if the
19 soil boring plan needs to be modified." Do you see
20 that?

21 A Yes.

22 Q Would that have been a request that you made?

23 A I think so. I think that would've -- that was
24 in my initial review letter.

25 Q And, again, you don't recall seeing any

1 modifications to the soil boring plan after you approved
2 it. Is that right?

3 A That's right.

4 Q So that will mean that the supplemental geology
5 report that was submitted in May 2016, any additional
6 borings were not pursuant to any plan that you approved.
7 Is that right?

8 A That's correct. By that time, the application
9 was outside of our jurisdiction, so...

10 Q Okay. So if the Applicant had wanted to obtain
11 your approval for an additional soil boring plan or a
12 modification to the soil boring plan, would they have
13 needed to have the application remanded to you?

14 A I don't know.

15 Q Okay. Can you turn with me to Rule 330.63, and
16 I will direct your attention to 330.63 Subsection
17 (e) (4).

18 A Okay.

19 Q Now, according to this provision of the rules,
20 an Applicant is required to identify in their geology
21 report slickensides, fractures, fissures, lenses, and
22 seams. Isn't that right?

23 A Yes.

24 Q Okay. And the reason is because fractures and
25 slickensides are secondary features that can affect the

1 ability of groundwater to move through rock. Isn't that
2 right?

3 A I think that's right.

4 Q Okay. Do you recall making that statement in
5 your deposition that --

6 A Which statement?

7 Q -- fractures and slickensides are features that
8 can affect the ability of groundwater to move through
9 the rock?

10 A I don't remember making the statement. But --
11 did I make that?

12 Q Would you agree with that statement?

13 A I've lost track of the question. Is it about
14 my --

15 Q I was trying to jog your memory.

16 But assume with me that fractures and
17 slickensides are secondary features that can affect the
18 ability of groundwater to move through the rock. Assume
19 with me that you made that statement during your
20 deposition. Do you have any reason to dispute or revise
21 that statement?

22 A No.

23 Q Okay. Thank you.

24 The Applicant in this case, in their
25 initial application that was declared technically

1 complete, they identified no fractures. Is that right?

2 A It's been a long time since I've looked at the
3 application, since I did the review, I will assume
4 that -- I don't remember whether or not there were
5 fractures, I heard so much here that I'm not sure what I
6 remember and what I have heard here.

7 Q Okay. Well, why don't we take a look at the
8 application to make sure we get it right.

9 A Okay.

10 Q And the geology report will be in 130EP-4. And
11 I'll direct you to Page 23, and that's the narrative
12 portion, and that might help you.

13 So have you had a chance to look at
14 Page 23?

15 A Okay.

16 Q Okay. So at least in Stratum II, it appears
17 they didn't observe any fractures. Is that right?

18 A Yes.

19 Q And they observed only -- the Applicant that
20 is, observed only one slickenside. Is that right?

21 A Yes.

22 Q And you reviewed the May 2016 supplemental
23 geology report that was submitted by the Applicant. Is
24 that right?

25 A Yes.

1 Q And in that report, they identified -- the
2 Applicant identified an additional 19 fractures. Isn't
3 that right?

4 A I don't remember the number, but I do remember
5 mention of fractures, yes.

6 Q Okay. Well, that document can be found at
7 Exhibit 130EP-7, Volume 5.

8 A Okay. I have it.

9 Q Okay. And I think if you turn to page -- let's
10 see, perhaps Page 5. I'm sorry. It's actually Page 9.
11 It's S-5 in the report, but it's Page 9 in the exhibit.
12 And if you go towards the bottom, a couple of sentences
13 in the full paragraph that's in the middle of the page,
14 you'll see the description of the fractures that were
15 observed.

16 A I see that.

17 Q Okay. And so it looks like they observed 19
18 fractures in 2016. Isn't that right?

19 A Yes.

20 Q Do you have any opinion as to the likelihood of
21 observing zero fractures in 2013 and then observing 19
22 fractures in the same area in 2016?

23 A I don't.

24 Q Okay. So in your prefiled testimony, where you
25 shared your opinion that the application and the

1 supplements comply with the requirements of Chapter 330,
2 just to be clear, are you stating that the Applicant
3 provided the information that's required by the rules?

4 A Yes.

5 Q So isn't it true that you're not going back and
6 verifying the sources of the information that are
7 provided in the application?

8 A Most of the information is generated by the
9 Applicant, and we rely on that information.

10 Q Okay. So if the information -- if the
11 information in the application is generated by the
12 Applicant, then you don't go and verify it. Is that
13 right?

14 A What do you mean by "verify"?

15 Q So the fractures that were identified in 2016,
16 you never asked to actually look at the samples or the
17 field logs. Isn't that right?

18 A No.

19 Q Okay. And in 2013, you never asked the
20 Applicant to allow you to view the samples or any field
21 logs. Isn't that right?

22 A That's correct.

23 Q Okay. And that is the standard practice?

24 A Yes.

25 Q Okay. So in the instance where your opinion

1 states that the Applicant has met the requirements of
2 the TCEQ rules, you mean that the Applicant has provided
3 information that complies with the TCEQ rules. Is that
4 right?

5 A Yes.

6 Q Okay. If boring logs existed for the
7 Reservoir 21 dam, would you have reviewed those?

8 A Well, if they were included in the application,
9 then I would've reviewed them.

10 Q Okay. But if they're not in the application
11 then, they're not going to be in front of you to review
12 basically?

13 A Not likely.

14 Q Okay. Do you compare the geology report with
15 any other portions of the application to make sure
16 they're consistent?

17 A Yes.

18 Q So in this case, would you have compared the
19 geology report with the archaeology report?

20 A No.

21 Q Would you have compared the geology report with
22 the wetlands investigation?

23 A No.

24 Q And -- well, do you know whether any subsurface
25 penetrations were made as part of the archaeological

1 investigation?

2 A I don't recall.

3 Q Okay. Do you know whether any subsurface
4 penetrations were made as part of the wetlands
5 investigation?

6 A I didn't review those parts, so I don't know.

7 Q Okay. And I think you -- I think you testified
8 that when the May 2016 additional geological information
9 was submitted, you were no longer conducting a technical
10 review of the application. Isn't that right?

11 A That's correct.

12 Q Okay. Because you didn't have jurisdiction to
13 do so?

14 A Correct.

15 Q Okay. So when that information was submitted
16 to you, what kind of review were you conducting?

17 A I wasn't conducting any review when we received
18 that.

19 Q Okay. What kind of review did you conduct of
20 the supplemental or additional data?

21 A Which supplement are we talking about?

22 Q May 2016.

23 A What kind of review did I do?

24 Q Yes.

25 A I read it.

1 Q Okay. So did you also read that the Applicant
2 made some changes to the top of casing elevations for
3 their piezometers?

4 A I recall there was something about that. I
5 don't remember the details, though.

6 Q Okay. Could making changes to the elevations
7 to the top of casing -- well, first of all, what does
8 that mean? Do you understand and can you explain to us
9 what that means when I use the phrase "top of casing
10 elevations"?

11 A Yes. We were -- we were talking about a
12 piezometer, which is a well that's used to observe
13 groundwater elevations, and a piezometer consists of a
14 casing that goes down to some depth, and then there's a
15 screen at the target depth where the investigator wants
16 to make observations. And in order to measure the
17 elevation, the surface location of the piezometer is
18 surveyed, and the -- the very top of the casing where it
19 comes out of the ground and sticks up, that point is
20 also measured and is used as a reference for measuring
21 the depth to groundwater, and, through a calculation,
22 determine the elevation of the groundwater.

23 Q Okay. Thank you.

24 So if there were -- if there were
25 revisions made or changes made to the top of casing

1 elevations, wouldn't that impact where the Applicant has
2 shown the -- the subsurface water elevations to be?

3 A Yes, I think, they would change by the same
4 amount.

5 Q Okay. And could it also impact where the
6 Applicant has shown the contact between the weathered
7 and unweathered strata to be?

8 A Possibly, if -- if those piezometers in
9 question were used for that purpose.

10 Q Okay. And would it also change the screen
11 interval?

12 A Well, the -- the physical piezometer itself
13 would, of course, still be of the same length, and the
14 screen would be of the same length. But its position,
15 its elevation would need to be corrected by whatever the
16 correction to the top of casing elevation is.

17 Q To reflect the accurate screened interval?

18 A Yes, to reflect the -- accurately the
19 elevations of the top and bottom of the screen interval.

20 Q Okay. So if the top of casing elevations were
21 wrong, then isn't it true that the potentiometric levels
22 were also wrong?

23 A Yes.

24 MS. PERALES: I think those are all my
25 questions. I'll pass the witness.

1 JUDGE QUALTROUGH: All right. Caldwell
2 County?

3 MR. MAGEE: I don't have any questions.

4 JUDGE QUALTROUGH: Redirect?

5 MR. TATU: No redirect, Judge.

6 JUDGE QUALTROUGH: Thank you very much.

7 Is that the end of the Executive
8 Director's case?

9 MR. TATU: It is.

10 JUDGE QUALTROUGH: All right. So that
11 moves us to the rebuttal portion, I believe.

12 MR. RYAN: Yes, Your Honor. Can I -- I
13 want to clarify one thing before we start that. My
14 understanding is that if we present a new witness, then
15 cross-examination is wide open, but if we present a
16 witness who's already testified, then cross-examination
17 will be limited to the matters raised on direct.

18 JUDGE QUALTROUGH: I'd have to look at
19 that. I haven't run across that before. So a new
20 witness that has not testified at this point? I'd have
21 to go --

22 MR. RYAN: I generally think if it's a new
23 witness, then they're subject to being fully
24 cross-examined, and I don't have a problem with that.
25 My question has more to do with the other -- mainly as

1 related to the other part of that, that if a witness has
2 already been subject to full cross-examination --

3 JUDGE QUALTROUGH: I think it's subject to
4 his rebuttal.

5 JUDGE BELL: Limited to his rebuttal.

6 JUDGE QUALTROUGH: Yeah, limited to his
7 rebuttal case.

8 JUDGE BELL: Anybody disagree with that?

9 MS. PERALES: It's kind of hard to
10 predict. I don't know who it is, but I would imagine
11 that even if limited to the rebuttal, we could get into
12 his credentials and question his reliability and so
13 forth.

14 JUDGE BELL: Somebody who's already been
15 on the stand?

16 MS. PERALES: No. I got it turned around.
17 Sorry.

18 JUDGE QUALTROUGH: I've always done it
19 where you put on your rebuttal case, and the
20 cross-examination is limited to the rebuttal case.

21 MR. RYAN: Okay.

22 JUDGE QUALTROUGH: But I haven't had the
23 situation where I've got a whole new witness and whether
24 that opens up cross to beyond the rebuttal case or not.
25 But it's my understanding that cross on a rebuttal

1 witness is limited to what he says on rebuttal.

2 JUDGE BELL: Regardless of whether or not
3 the rebuttal witness has previously testified? Because
4 I think the typical rule would be a new witness would be
5 open to any cross-examination, so I think we should
6 stick with that.

7 MR. RYAN: Okay. It may not come up.

8 JUDGE BELL: May not come up.

9 JUDGE QUALTROUGH: So I think we ought to
10 take a break.

11 MR. RYAN: Okay. That would be good.

12 JUDGE QUALTROUGH: Let's take 15 minutes.
13 Come back at 10:35.

14 MR. RYAN: Okay.

15 (Recess: 10:23 a.m. to 10:41 a.m.)

16 JUDGE QUALTROUGH: We are back on the
17 record. You may call your first witness.

18 MR. RYAN: Thank you.

19 We call Mr. Tyson Traw.

20 JUDGE QUALTROUGH: Let me go ahead and
21 swear you in again.

22 (Witness sworn)

23 REBUTTAL PRESENTATION ON BEHALF OF APPLICANT

24 TYSON L. TRAW, P.E.,

25 having been first duly sworn, testified as follows:

1 DIRECT EXAMINATION

2 BY MR. RYAN:

3 Q Mr. Traw, did you change the design storm that
4 you used in the floodplain delineations you did for the
5 130 Environmental Park project?

6 A Did I change them?

7 Q Yes, the design storm that you used in those
8 floodplain delineations?9 A I used the same design storm throughout the
10 submission of the application for the floodplain
11 delineation.12 Q Did you perform a floodplain delineation that
13 was included in the TCEQ municipal solid waste permit
14 application?

15 A Yes.

16 Q And did you also do floodplain delineation work
17 that was included with submittals to Caldwell County in
18 connection with the preliminary plat?

19 A Yes.

20 Q What design storm did you use in connection
21 with those floodplain delineations?22 A For both of them, I used the 100-year, 10-day
23 storm event.24 Q And did you use that same storm event in every
25 floodplain delineation that you performed for the 130

1 Environment Park project?

2 A Yes.

3 Q You never switched from that to another design
4 storm?

5 A No.

6 Q Why did you use a 100-year, 10-day storm event
7 instead of something else for that work?

8 A Because of the storm events that were -- are
9 typically used, it yielded the most extensive
10 floodplain, which would be the one that I would want to
11 include in that analysis.

12 Q Okay. So that's for the floodplain delineation
13 work. What about for the pre- and post-development
14 drainage analysis that you did as a part of TCEQ permit
15 application, what design storm is required to be used
16 for that work?

17 A That would be the 25-year, 24-hour storm.

18 Q And is it correct that you didn't do
19 pre-development and post-development drainage analysis
20 and comparison as part of the work you did for the
21 Caldwell County preliminary plat?

22 A Yes.

23 Q So that plat process -- preliminary platting
24 process requires floodplain delineation but not
25 comparison of pre-development and post development

1 drainage conditions?

2 A That's correct.

3 Q Okay. You said that the TCEQ rules require use
4 of the 25-year, 24-hour storm for the TCEQ pre- and
5 post-drainage analysis?

6 A That's correct.

7 Q Did you use that storm for that work?

8 A Remind me of what work we're referring to
9 again.

10 Q Oh, the pre- and post-development drainage
11 analysis for the TCEQ application. Did you use the
12 25-year, 24-hour storm?

13 A Yes.

14 Q Did you also -- as part of the drainage
15 analysis you did for the TCEQ permit application, did
16 you also do initial analysis using a different design
17 storm?

18 A Yes.

19 Q What was that other design storm?

20 A We also looked at the 100-year, 24-hour.

21 Q Is that required under TCEQ rules?

22 A No.

23 Q Why did you do it?

24 A Well, we wanted to ensure that our design was
25 valid for the 100-year, 24-hour storm, as well as the

1 25-year that was required by the rules.

2 Q Okay. Now I want to switch back and talk about
3 the floodplain delineation work that you did in
4 connection with the preliminary plat application to
5 Caldwell County.

6 Was the original floodplain delineation
7 that you submitted with the preliminary plat application
8 the same as the floodplain delineation submitted in the
9 TCEQ municipal solid waste application?

10 A Yes.

11 Q Did you prepare and submit to the County
12 revisions to that initial floodplain delineation?

13 A Yes.

14 Q And why did you do that?

15 A They were requested by Caldwell County's
16 engineer, Mr. Bratton.

17 Q When you made revisions to that -- to the
18 floodplain delineation as part of the preliminary
19 platting process, did you always use the 100-year,
20 10-day storm event?

21 A Yes.

22 Q What are the revisions that you made to the
23 floodplain delineation work that was submitted to
24 Caldwell County for the preliminary plat? What were
25 those changes? What did they consist of?

1 A There were several rounds of comments back and
2 forth. Generally, those consisted of a few changes to
3 the hydraulic model. And then, as we've heard about,
4 the -- also, there were changes to the hydrology related
5 to Manning's roughness coefficients and the use of
6 shallow concentrated flow versus channel flow.

7 Q And did one of the changes that you made relate
8 to some revision to the area being considered?

9 A Well, we certainly -- initially, we submitted
10 the same analysis that was in the application.

11 Q The TCEQ permit application?

12 A The TCEQ permit application. And then it
13 became evident that we needed to expand the scope for
14 the preliminary plat to the entire property. So that --
15 so eventually we submitted a floodplain delineation
16 using the same methodology as the previous application,
17 just expanded to the entire property, of the Hunter
18 tract to be specific.

19 Q Okay. Can you find up there what's been marked
20 as Exhibit 130EP-25?

21 A I have that.

22 Q Okay. Now, the landfill footprint, as shown on
23 there, that is something that you added to that drawing
24 fairly recently?

25 A That's correct.

1 Q Earlier this month, I think?

2 A Yes.

3 Q Okay. With the exception of that, if you
4 consider that drawing without the landfill footprint on
5 there, was the floodplain -- was that delineation of the
6 floodplain submitted to Caldwell County as part of the
7 preliminary plat materials?

8 A Yes.

9 Q And would that have been as part of the final
10 version of the preliminary plat materials submitted to
11 the County?

12 A Yes.

13 Q Do you recall about when that was that that
14 floodplain delineation was submitted to the County?

15 A Yes. It was about -- it was in February. I
16 believe the date was the 19th of February 2015.

17 Q Okay. And is it true that one of the changes
18 that you made, at Mr. Bratton's request during the
19 preliminary plat review process, was to change some of
20 the Manning's coefficients that you had used to
21 ultimately determine the floodplain delineation?

22 A Yes.

23 Q Do you believe that the Manning's coefficients
24 you had used in your initial floodplain delineation were
25 accurate and appropriate?

1 A I do.

2 Q What did you do to determine which Manning's
3 coefficients you would use in that delineation work?

4 A Well, so, first of all, we select Manning's
5 roughness for not only the channel, but also the
6 floodplain. I'm going to take the floodplain first.

7 For the floodplain, you can typically have
8 a pretty good understanding of what the roughness might
9 be from the aerial photo. But that's not the case for
10 the channel. And that's because the cover often
11 obscures the channel, like, for example, trees and that
12 type of cover, such that you can't get a depiction of
13 what that channel might look like. So I made several
14 site visits, and I walked the unnamed tributary in Dry
15 Creek extensively, specifically in the areas where tree
16 cover prevented my ability to characterize the channel.

17 Q So is observation and determination of the
18 specific conditions in a channel reach an important part
19 of making the decision about what Manning's roughness
20 coefficient to use for that channel reach?

21 A Absolutely.

22 Q And, in fact, is the condition of the channel
23 and the way in which water moves through it, does that
24 information provide the entire basis for selecting a
25 particular roughness coefficient?

1 A Can you repeat that?

2 Q Yeah.

3 Is there anything else that goes into the
4 selection of a roughness coefficient, other than the
5 characteristics of a channel and the way in which water
6 is going to move through it?

7 A No. I think that's a fair characterization.

8 Q Okay. And so based on observations of the
9 channel itself and the way water is going to move
10 through it, you then select a Manning's roughness
11 coefficient from a table that lists various options for
12 that coefficient?

13 MR. MAGEE: Objection, leading.

14 Q (BY MR. RYAN) How do you use that information
15 to select the roughness coefficient?

16 A So typically we rely on a table as, you
17 suggested, that describes the channel characteristics
18 that one might encounter, and it will have an associated
19 suggested range of roughness coefficients for that
20 description. So -- and it could be anywhere from --
21 just to make a distinction, a concrete channel might
22 have a roughness anywhere from .01 to .013, where -- and
23 I mean, they say tables can get really lengthy as to the
24 specific criteria that one might -- how one might
25 describe the channel.

1 Q If you were undertaking a floodplain
2 delineation on the Hunter tract today and you could
3 choose whatever you wanted for your Manning's roughness
4 coefficients, would you use the same ones that you used
5 in your initial floodplain delineation work for the TCEQ
6 permit application?

7 A Yes.

8 Q Do you believe that the Manning's roughness
9 coefficients and channelized flow assumptions that
10 Mr. Bratton asked you to use in revised floodplain
11 delineations for the preliminary plat were conservative?

12 A No, I do not.

13 Q Do you have greater confidence in the Manning's
14 roughness coefficients that you used in your initial
15 floodplain delineation work than those that Mr. Bratton
16 requested that you use?

17 A Yes, I do.

18 Q If you were to start over again with the
19 floodplain delineation on the Hunter tract today, would
20 you use the more detailed LiDAR topographic data that
21 Mr. Bratton suggested that you use in the revised
22 models?

23 A Yes, I probably would.

24 Q And just to be clear, you did use that LiDAR
25 topographic data in the revised modeling work that you

1 did for the Caldwell County preliminary plat
2 application?

3 A Yes, that's correct.

4 Q And that's the floodplain delineation that's
5 depicted on Exhibit 130EP-25?

6 A Yes. You can see the finer contours when you
7 compare EP-25 to the exhibit that's in the application
8 that's similar to this. Outside of the facility
9 boundary, there was different topographic data that was
10 the used.

11 Q Okay. Now I want to switch over and ask you
12 about the pre-development and post-development drainage
13 analysis that was done in connection with the TCEQ
14 municipal solid waste permit application.

15 If you were to redo that work using the
16 assumptions that Mr. Bratton had asked you to use in
17 connection with the floodplain delineation work that you
18 did for the preliminary plat, would that have changed
19 your determination of no adverse alteration between the
20 pre- and post-development conditions at the landfill
21 site?

22 A No.

23 Q Why not?

24 A Well, Mr. Bratton's comments were mainly
25 limited to watersheds that were beyond the facility

1 boundary, and we're not changing the watersheds beyond
2 the facility boundary in terms of their watershed
3 characteristics.

4 Q Again, in terms of the work that you did for
5 the TCEQ permit application, if you had done the
6 drainage analysis for that work using Mr. Bratton's
7 recommended assumptions in both the pre- and
8 post-development conditions, would that have led to a
9 change as far as the design requirements for the
10 detention ponds associated with the proposed landfill?

11 A The ponds could have been smaller, perhaps.
12 I'm not sure that we would've changed those. But, you
13 know, if we were really trying to -- we show that
14 there's a significant reduction in discharge with the
15 ponds. So I'm not saying that the pond design would
16 necessarily change, but it could have if we wanted to
17 get closer to what we actually had to prove up to comply
18 with the rules.

19 Q When you say that it could have changed, do you
20 mean that the design requirement would have allowed
21 smaller ponds?

22 A Yes.

23 Q Does TR55 specify any limit on the allowable
24 length of shallow concentrated flow?

25 A No.

1 Q Does the National Engineering Handbook specify
2 any limit on the allowable length of shallow
3 concentrated flow?

4 A Not that I'm aware of.

5 Q Are you aware of any reference source that does
6 specify a maximum allowable length for shallow
7 concentrated flow?

8 A I'm not.

9 Q How do you decide where in a particular reach
10 you will make the change from shallow concentrated flow
11 to open channel flow?

12 A For that analysis that I conducted, I changed
13 from shallow concentrated flow to channel flow where I
14 had sufficient topographic data to determine the channel
15 geometry in such a way that I could use the methods
16 described in the channel flow description in TR55.

17 Q And when you did your -- when you did your
18 initial floodplain delineation work, was that off-site
19 topographic information that you had based on the USGS
20 topographic map?

21 A Yes.

22 Q And after Mr. Bratton made you aware of the
23 LiDAR topographic data that CAPCOG had, did you use that
24 data?

25 A Yes.

1 Q Does the TCEQ MSW permit application identify
2 and describe the unit hydrograph that was used -- that
3 you used in the drainage analysis and design?

4 A Can you repeat that, please?

5 Q Yeah.

6 Does the TCEQ municipal solid waste permit
7 application identify and describe the unit hydrograph
8 that you used in the drainage analysis and design work
9 you did?

10 A Yes.

11 Q Do you have up there Exhibit 130EP-2?

12 A I do.

13 Q Can you identify for us where in the
14 application it identifies and describes that unit
15 hydrograph that you used?

16 A Yes, I can. It's been talked in a couple of
17 places. The example -- the first one I turned to is
18 Page 85, and it's under the heading topic "Synthetic
19 Unit Hydrographs and Flow Routing." And it's in the
20 first paragraph there under that heading.

21 Q Okay. And that includes a reference to TR55?

22 A It does.

23 Q And does TR55 include additional information
24 about that SCS method in the unit hydrograph?

25 A It does.

1 Q Okay. Anywhere else in the application that
2 refers to the specific unit hydrograph that was used?

3 A So we refer to that again on Page 121. In
4 fact, that's the identical wording. It's just saying
5 that we used the same method for the post-development
6 analysis that we used for the existing.

7 Q Okay. Did you use any peaking factors in
8 connection with your use of the unit hydrograph?

9 A No.

10 Q Why not?

11 A That unit hydrograph is developed by the SCS,
12 and you don't apply peaking factors to that.

13 Q Did you do the design for the culverts at the
14 locations where the site entrance road is proposed to
15 cross stream channels?

16 A I did.

17 Q What design storm did you use in designing
18 those crossings?

19 A On the ones outside of the application -- or
20 outside of the facility boundary, I used the 25-year
21 design storm, and the ones inside the facility boundary,
22 we used the 100-year.

23 Q Why did you use the 25-year storm for the
24 crossings outside the facility boundary?

25 A I referenced the TxDOT Drainage Design Manual,

1 and the recommended design storm for principal
2 arterials, which is the same classification as US 183.
3 So we used the same standards that are recommended for
4 US 183.

5 Q Are you familiar with the rehabilitation work
6 to the dam at reservoir Site 21 that is under
7 consideration by the NRCS?

8 A I'm familiar with some of the exhibits that
9 have been talked about in this proceeding and some of
10 the preliminary findings of different consultants
11 working for the NRCS.

12 Q Would that rehabilitation work to the dam
13 affect the 100-year floodplain?

14 A It would.

15 Q Let's see. Can you find Plum Creek
16 Conservation District Exhibit 1.6. There should be a
17 Plum Creek folder up there.

18 Do you have that exhibit?

19 A I do.

20 Q And is there somewhere in here that provides
21 some specific information on that potential
22 rehabilitation work?

23 A Yes, there's several pages.

24 Q Is there one that provides a general
25 description of what that work would consist of?

1 A I believe Page 58 provides a summary of what
2 the improvements would entail.

3 Q Okay. And would you describe the main
4 improvements.

5 A Well, they say that a new principal spillway
6 system will be installed and at a crest elevation of
7 500 feet and with a 42-inch diameter conduit. And then
8 they go on and talk about the -- the auxiliary spillway
9 will be replaced with a 300-foot wide roller-compacted
10 concrete spillway. And then they go on to talk about
11 the dam crest itself will be raised approximately
12 3.9 feet. And then some other -- some other things; I'm
13 not sure how they would relate to the effects of the
14 floodplain.

15 Q Okay. How would these proposed improvements
16 affect the extent of the 100-year floodplain?

17 A They would reduce it.

18 Q And why is that?

19 A So for a couple of reasons. The principal
20 spillway has -- the new principal spillway would have a
21 greater capacity than the existing one, and it would
22 begin to discharge at an earlier time in the storm
23 event. And then also, the auxiliary spillway, the
24 300-foot wide, roller-compacted concrete spillway would
25 have a higher capacity than the existing one.

1 Q Thank you, Mr. Traw.

2 MR. RYAN: I'll pass the witness.

3 JUDGE QUALTROUGH: Plum Creek.

4 MR. WILSON: I do have some questions for
5 Mr. Traw.

6 CROSS-EXAMINATION

7 BY MR. WILSON:

8 Q Mr. Traw, I'm Bob Wilson, again, for Plum
9 Creek. Welcome back.

10 You just answered a question from Mr. Ryan
11 about reducing the 100-year floodplain. I assume your
12 answer meant upstream of the reservoir. Is that
13 correct?

14 A That's correct. My answer was limited to
15 upstream of the reservoir. I haven't made any
16 determinations about what might occur downstream of it.

17 Q If the rate of release of water increases, is
18 the potential for increasing the floodplain downstream
19 of the structure also increased?

20 A Not necessarily.

21 Q Because that depends upon the channel carrying
22 capacity downstream?

23 A Not only that. You have to consider the entire
24 watershed and the stage discharge and storage
25 relationship of the reservoir to make that

1 determination. So I would have to go to something more
2 significant in terms of analysis to determine the
3 effects on the floodplain downstream of the dam.

4 Q Is it fair to say the Applicant is not charged
5 with the duty for doing any of that in connection with
6 the municipal solid waste application?

7 A Yes.

8 Q But Plum Creek is charged with the duty for
9 doing it, aren't we?

10 A I wouldn't have an opinion about that.

11 Q You just don't know that much about what Plum
12 Creek is required to do, do you?

13 A Well, I think the general mission is providing
14 floodwater retardants.

15 Q Okay. One of the reasons I'm glad your back is
16 because one of the exhibits that Plum Creek has is the
17 as-built drawings of the existing site. Is that
18 correct?

19 A I think there's three pages.

20 Q Yes, sir. On the first page of that, does it
21 include a total storage capacity of the existing
22 reservoir?

23 A I'd need to reference that.

24 Q Do you mind looking for it, see if you can find
25 it?

1 A Sure.

2 Q I don't know the page number, and I don't have
3 it in front of me. I'm sorry.

4 A Well, I have the as-builts, but I don't see a
5 page number.

6 Q Okay. I think it's on a table on the first
7 page, is it not?

8 A Yeah, it says Exhibit No. 1.4 in the --

9 Q Okay.

10 A -- table of contents.

11 Q And the first page of that is a floodwater
12 retarding structure dam label, is that correct, Dam 21?

13 A Yeah, I think I would probably describe that as
14 a cover sheet to the plans for the -- the construction
15 plans for the dam.

16 Q What does it say the drainage area is?

17 JUDGE QUALTROUGH: Can you hold on,
18 please.

19 MR. WILSON: All right.

20 JUDGE QUALTROUGH: I'm having issues.
21 Where is it again?

22 MR. WILSON: It's Exhibit 1.4, and it's
23 the overleaf right behind the exhibit title. If you
24 turn the exhibit title 1.4 over to that title page, it's
25 on the reverse of that page.

1 JUDGE QUALTROUGH: Hold on.

2 MR. WILSON: I could give you a hint of
3 what it looks like.

4 JUDGE QUALTROUGH: Well, I'm going through
5 a lot of legal documents. Is it before -- okay, here's
6 1.3. Okay. Hold on. All right. I'm at 1.4, at three
7 as-built sheets. Okay.

8 MR. WILSON: You got it.

9 Q (BY MR. WILSON) My question to you, Mr. Traw,
10 is, is there a labeling in this exhibit of the total
11 drainage area?

12 A I believe so.

13 Q And that's 5,536 acres. Is that correct?

14 A That's what it says.

15 Q When you did your comparison with the
16 pre-development and post-development, I recall your
17 table showing an increase of 33 acre-feet. Is that
18 correct?

19 A I'm not sure it was 33, but that's close.

20 Q Is that from just the 200 acres of the site
21 that were to be development, or 200-plus, whatever they
22 are, in the landfill plan?

23 A Yes. We didn't evaluate changes outside the
24 facility boundary.

25 Q All right. So just the changes in that small

1 percentage of this total acreage in the watershed would
2 have increased the runoff to that structure under your
3 designed storm calculation by 33 acre-feet?

4 A Again, I'm not sure about the number.

5 Q Okay. About 33 acre-feet. Let me just say
6 about. Okay?

7 A Okay.

8 Q All right. Do you know the storm that Plum
9 Creek has to design for, for using for the hydraulic
10 capacity of that structure?

11 A Are you referring to the NRCS requirements?

12 Q I'm talking about dam safety act requirements
13 for the State of Texas.

14 A I'm somewhat familiar with those. I'd probably
15 want to reference Chapter 299. I believe it's 75 percent
16 of the PMF for this dam, but I'm not absolutely certain.

17 Q Do you know the release time associated with
18 the hydraulic capacity calculation?

19 A No, sir, I'm not familiar with that.

20 Q And what is a PMF?

21 A That is the flood resulting from the probable
22 maximum precipitation.

23 Q Now, that is a greater flood event than any
24 flood event that you used in your calculations. Is that
25 not correct?

1 A By a large -- by a large margin.

2 Q So whereas the TCEQ rules for municipal solid
3 waste site apply 25-year, 24-hour rainfall events, in
4 some instances a 100-year rainfall event, Plum Creek has
5 to plan for a rainfall event calculated on the probable
6 maximum flood. Is that your understanding?

7 A Yes, sir.

8 Q And have you done any studies showing what
9 impact any of the changes in the landfill permitted area
10 would have on the runoff associated with the probable
11 maximum flooding?

12 A I have not.

13 Q Do you know if anybody's done any of those
14 studies?

15 A I'm not sure.

16 Q Do you know if Plum Creek has the
17 responsibility of doing those studies that would include
18 the site operations if the permit were granted and the
19 site were built?

20 A It would be my understanding that at whatever
21 point the design for the rehabilitation of the dam were
22 to be finalized, they would take into account the
23 existing conditions at that time. That's my
24 understanding of it.

25 Q And right now, the site doesn't exist, and it's

1 not built. Is that correct?

2 A I'm not sure I understand your question.

3 Q There is no landfill site out there in the
4 watershed of Site 21 of Plum Creek, is there?

5 A That's correct.

6 Q So if the landfill were permitted and then
7 constructed, that would be a change that Plum Creek
8 would have to take into account, would it not?

9 A I'm not sure they would have to, but I believe
10 they would. Yeah.

11 Q And at the present time, nobody knows what the
12 impacts of that would be, do they, as far as you've
13 heard during this hearing?

14 A As far as I've heard during this hearing, no, I
15 don't know that I've heard anyone talk about those
16 potential impacts.

17 Q Do you know whether the operating rules in
18 terms of release of water from the structure would be
19 changed under the upgraded design for a rehabilitated
20 structure?

21 A Could you ask that one more time? You lost me
22 about midway through.

23 Q Yes, sir. And I'll make it specific.

24 You talked about -- in your testimony, you
25 talked about the changes, for one thing, being a 42-inch

1 outlet pipe structure from the dam. Is that correct?

2 A Yes, sir.

3 Q Do you know what the current outlet pipe is?

4 A I'd have to refer to the application to the
5 sure. I think it's a 30-inch.

6 Q All right. So the rehabilitation contemplates
7 an increased outflow from the structure, does it not?

8 A Yes.

9 Q Do you know if anybody's done any studies of
10 any backwater effect of the rehabilitated dam to see how
11 it would impact areas upstream from the dam?

12 A I'm not aware of any study. The basis for my
13 opinion on the effects -- to the floodplain are
14 conceptual in that the capacity of the structures that
15 would pass the flood have a greater capacity, and their
16 elevation is lower such that they would begin to
17 discharge earlier. And I think -- you know, maybe I
18 might be able to answer that question a little better if
19 I could remember what the question was.

20 I think there is an analysis shown in 1.6
21 that uses the same storm, where it shows a reduction in
22 the flood pool within the reservoir with the new
23 improvements.

24 Q Is the flood pool the same as the floodplain?

25 A Not necessarily. On this site, the flood pool

1 is very important to the floodplain.

2 Q A related question, and I recall your exhibit
3 talking about an observation point at the point that the
4 Hunter tract -- water from the Hunter tract exits the
5 tract in Dry Creek boundary. Do you recall that?

6 A Yeah. We call them comparison points.

7 Q All right. Comparison points.

8 Do you know what the carrying capacity
9 under Farm Road 1185 is at that comparison point?

10 A I don't know what it was designed for. And I
11 know that I studied that area as it related to the
12 preliminary plat, because we included that within our
13 scope of -- our study area. I don't recall whether it
14 overtopped in the hundred-year storm or not.

15 Q All right. The only people who would know that
16 are probably Texas Department of highways and traffic --
17 TxDOT, or maybe Caldwell County. Is that correct?

18 A I guess it depends on what you're asking you.
19 Might have to clarify the question.

20 Q Excuse me. My question -- I'm curious to know
21 if there has to be increases in releases from Site 21 as
22 a result of the upgraded structure, are those increases
23 going to change what happens where Dry Creek goes under
24 1185?

25 A I couldn't be certain about that, and I haven't

1 seen that studied in the NRCS report.

2 Q All right.

3 A They may have accounted for it. I'm just not
4 aware of it.

5 Q Were you here when I asked the question if
6 anybody has designed this structure yet? I asked
7 Mr. Halliburton that question, I think.

8 A What structure are you referring to?

9 Q The upgrade of Site 21.

10 A I was here. I don't recall that question.

11 Q If I represented to you that the upgrade
12 rehabilitation of the structure has not yet been
13 designed, would you accept that?

14 A I guess it would depend upon what -- how we
15 define "design." I certainly haven't seen any
16 construction plans.

17 Q All right.

18 A So...

19 Q Okay.

20 MR. WILSON: I believe that's all the
21 questions I have. Thank you.

22 JUDGE QUALTROUGH: All right. I'm trying
23 to figure out who goes next. OPIC.

24 CROSS-EXAMINATION

25 BY MR. TUCKER:

1 Q Good morning, Mr. Traw.

2 A Good morning.

3 Q Aaron Tucker with the Office of Public Interest
4 Counsel. I just have a few questions.

5 I'd like to focus on the roughness
6 coefficient calculations.

7 A Okay.

8 Q You were talking with Mr. Ryan about how you
9 came up with that number, and I guess -- first let me
10 ask you to turn to Applicant's exhibiting 130EP-2,
11 Page 270.

12 A Just a moment. I'm going to try to put these
13 back together.

14 JUDGE BELL: I'm sorry, what page?

15 MR. TUCKER: Page 270.

16 JUDGE BELL: Thank you.

17 A Okay. You said 130EP-2, Page 70?

18 Q (BY MR. TUCKER) Yes.

19 A I'm there.

20 Q And so the three Manning's roughness numbers
21 that we see on this table, these are the ones that --
22 or, I guess, two of these are the ones that you and
23 Caldwell County had a disagreement about what was
24 appropriate?

25 A No, not necessarily.

1 Q Okay.

2 A And I'll try to clear this up. Manning's
3 roughness is used in various different ways. It's a
4 characterization of the channel. It's used to calculate
5 what is called normal depth or the velocity when the
6 stream is at normal depth. We used that throughout. So
7 it's used in the hydrology, which this is a portion of
8 right here. This is specifically for the routing
9 perimeters. So but we also use that for time of
10 concentration. We also use that in the hydraulic model,
11 which is the final step before delineating the
12 floodplain.

13 So I don't know if I've made that clear,
14 but when you refer to it, it really is throughout the
15 entire analysis.

16 Q Yes. Okay.

17 And -- but this chart shows the number
18 that you assigned to certain reaches. Correct?

19 A For just the routing parameters, yes.

20 Q Okay. Just the routing parameters?

21 A Right.

22 Q So do these reaches have different -- did you
23 assign different Manning's coefficient numbers to these
24 reaches for different purposes?

25 A I'm not sure I understand your question.

1 Q Are the Manning's roughness numbers that you
2 assigned to these reaches different in other parts of
3 the application?

4 A They may be, because here, I'm trying to apply
5 an average roughness over that entire reach.

6 Q Okay.

7 A So in other places in the analysis, I'm much
8 more specific about, no, no, at this cross section, the
9 roughness is this, and you go up stream or downstream,
10 it might be something completely different. I wouldn't
11 have been able to do that had I, you know, not evaluated
12 that entire stream.

13 Q Okay. And Mr. Ryan asked you -- in reply to a
14 question that Mr. Ryan asked you, you stated that you
15 relied on a table to characterize the reach.

16 A That's correct.

17 Q What table did you rely on?

18 A The actual reference I used was the TxDOT
19 drainage design manual. But the person responsible for
20 all of that was a professor from the University of
21 Illinois, Dr. Chow, and everybody references him. So
22 that was the -- I guess that's the bible, so to speak.

23 Q Okay. Is that sources in the application?

24 A No. We reference the TxDOT drainage manual
25 because there's nowhere in the rules, that I'm aware of,

1 that they talk about Mr. Chow. But the TxDOT drainage
2 manual is talked about as an acceptable reference.

3 Q Okay. And in order to get to this coefficient,
4 you need to characterize the stream, and then that
5 characterization, you're looking at the table to see
6 what the appropriate coefficient is?

7 A Generally that's right, yeah.

8 Q Okay. And so the characteristics that you come
9 up -- the description, leads us to the appropriate
10 number?

11 A I would say that's generally correct, yes.

12 Q Are those characterizations of the stream in
13 the application?

14 A We don't specifically identify at each cross
15 section what they would be. That would get to be
16 probably really burdensome to list out each one of
17 those.

18 Q Okay. If someone wanted to check your work,
19 would it help them to have those characterizations?

20 A Well, they can certainly correspond the
21 Manning's roughness with the characterizations in the
22 table. So they would be able to see, well, at this
23 place, he thinks the stream looks like this.

24 Q Okay. But -- so you wouldn't be able to see if
25 you had the same -- without the characterization in the

1 application, you wouldn't be able to see if you
2 characterized the stream -- if someone is checking your
3 work, they wouldn't be able to see if the
4 characterization was the same. Right?

5 A Well, I think they probably wouldn't be able to
6 see if they had the same characterization unless they
7 were there, looking at the channel.

8 Q Okay.

9 A I'm not even sure a photograph would really
10 convey everything you're trying to get from what you can
11 observe on site.

12 MR. TUCKER: Okay. I have no more
13 questions. Thank you.

14 JUDGE QUALTROUGH: And I believe I took
15 you out of order. I think I should have gone to the ED
16 first. So I'll know better next time.

17 MR. TATU: Just a few questions.

18 CROSS-EXAMINATION

19 BY MR. TATU:

20 Q Good morning, Mr. Traw.

21 A Good morning.

22 Q I wanted to ask you a few questions about
23 drainage again.

24 I understood your rebuttal testimony that
25 if you were to redo your pre- and post-drainage analysis

1 using the assumptions that Mr. Bratton suggested, you
2 would have not changed your conclusion regarding adverse
3 alteration of drainage patterns. Is that correct?

4 A That's correct.

5 Q I want to take a quick look at one of your
6 tables that's in 130EP-2. We talked about it initially
7 already once. Page 79.

8 A Okay.

9 Q Sorry -- yeah, they're tables. I think I call
10 them charts initially and you corrected me.

11 My question is this. If you were to use
12 the assumptions that Mr. Bratton suggested, for some of
13 these comparison points, these numbers for existing and
14 post-development peak discharge, volume, and velocity
15 would change. Is that true?

16 A Some of them would change, yes, if I were to
17 use those requested revisions or assumptions --
18 Mr. Bratton's assumptions.

19 Q So they would change not only in the existing
20 conditions, but also in post-development conditions. Is
21 that true also?

22 A Yes.

23 Q So I want to see if we can do this, and if this
24 isn't possible, just let me know.

25 I'm going to choose a comparison point,

1 and I'll choose one where there's an increase in volume.
2 So let's say CP7 and focusing on the second table, which
3 focuses on volume. So the existing volume, would that
4 increase using Mr. Bratton's assumptions?

5 A No.

6 Q And why is that?

7 A His assumptions wouldn't have an effect on
8 runoff volume. We're primarily talking -- the effect
9 would be limited to the top table, for the most part, in
10 being peak discharge. There may be a change to the
11 bottom table in velocity. It would be extremely small
12 if there were.

13 Q Okay. So let's take a look at the first table,
14 then. Let's say CP7, the existing 25-year peak
15 discharge in CFS, using Mr. Bratton's assumptions, would
16 that number increase?

17 A On CP7?

18 Q Yes.

19 A And did you say for the existing?

20 Q Yes, for existing.

21 A Yes, that would increase.

22 Q Okay. And then would it also increase in
23 post-development?

24 A Well, it would -- the -- let's see. Let me
25 refer to where CP7 is. Actually, CP7, there would

1 probably be no change.

2 Q It decreases in post-development. Right? The
3 way -- under your analysis currently, it goes from 243.4
4 to 141.8, using your analysis.

5 A Right. That's what it says. I really should
6 probably back up and say CP7, using Mr. Bratton's
7 assumptions, that number would -- if it were to change,
8 it would be very minimal at that comparison point.

9 Q Okay. So would the difference, then, still be
10 a decrease?

11 A Yeah, it's going to stay about the same. The
12 difference is going to stay fairly near to 101.6 for
13 that comparison point.

14 Q Okay. So let me just ask you this. If you
15 were to use Mr. Bratton's assumptions, where would we
16 see the biggest change? Would it be in this top table
17 as opposed to the bottom table regarding velocity?

18 A You're going to see the largest change in
19 watersheds that are large or sub basins that have a
20 large area, and primarily those are off site. So, like,
21 if we flip over to Page 77, you would see changes in
22 OS3, OS2, OS1, OS16.

23 Q What kind of changes are we talking about?

24 A In peak discharge.

25 Q Okay. And how about in velocity?

1 A The velocity would correspondingly go up, but
2 it's going to be very minimal.

3 Q So it would not go up to the point where you
4 would consider it to be an adverse alteration to the
5 drainage patterns?

6 A Well, when I'm talking about the velocity would
7 go up, I'm talking about in the existing condition.

8 Q How about in post-development?

9 A It will -- the velocity, there's going to
10 essentially be no change to that. I mean, I couldn't --
11 I couldn't tell you how much it's going to be, because
12 it's probably going to be, you know, in the hundreds of
13 a foot per second. If there were a change.

14 Q Okay. Thanks.

15 MR. TATU: No further questions.

16 JUDGE QUALTROUGH: Caldwell County next.

17 MR. MAGEE: I'm ready.

18 JUDGE QUALTROUGH: All right.

19 CROSS-EXAMINATION

20 BY MR. MAGEE:

21 Q Mr. Traw, I'm going to look around here.

22 A Which side are we going?

23 Q All right. Thanks.

24 The ED just asked you some questions about
25 Page 79. I want you to stay on that page and also go to

1 Page 78. So he was asking you if you used the
2 calculations that you changed in the preliminary plat
3 for Mr. Bratton, what that change in velocity, volume,
4 and peak discharge would be. Right? Generally, those
5 were his questions?

6 A Yeah.

7 Q Okay. A term you used that I really like,
8 you're kind of comparing apples to oranges, because for
9 the preliminary plat and all the data that you submitted
10 to Mr. Bratton, you agree with me that these comparison
11 points, some of them changed. Right?

12 A Well, are you referring to when you used apples
13 and oranges previously? Or maybe I don't understand the
14 question.

15 Q Well, I mean, he's asking you to compare this
16 data on 79 and say whether in your opinion it changes
17 using the calculations that Mr. Bratton had you use.
18 Right? My point is the calculations and the parameters
19 that you used for Mr. Bratton's preliminary plat
20 information changed also these comparison points. So
21 it's difficult to say whether there's a change in this
22 information compared to the preliminary plat
23 information. Right? Because the comparison points
24 changed?

25 A I am confused by your question.

1 Q Would you agree with me that you changed the
2 comparison points as part of preliminary plat?

3 A No. As part of the preliminary plat, we didn't
4 even have comparison points.

5 Q So you didn't make any changes to comparison
6 points and how peak discharge volume and velocity was
7 measured at certain points in the preliminary plat?

8 A The comparison points are to evaluate the
9 difference between existing and post-development
10 conditions to demonstrate that there's no adverse
11 alteration of drainage patterns.

12 For the preliminary plat, the sole purpose
13 of that analysis was to delineate the floodplain. We
14 weren't trying to consider any effect of development.
15 We were just trying to file the preliminary plat, which
16 required us to analyze the 100-year flood and delineate
17 the 100-year floodplain, including the setbacks in the
18 ordinance to determine what areas on the Hunter tract
19 needed to be dedicated in an easement on the final plat.
20 That was the sole purpose of that analysis.

21 Q So what other changes did you make on the
22 preliminary plat information, the LiDAR data?

23 A Well, initially we expanded the study area to
24 include the entire property. And I'm going to kind of
25 summarize, because I don't remember each and every step.

1 But we expanded the study area.

2 Q Okay.

3 A We added the LiDAR. We made some minor
4 modifications to the hydraulic model. And we made the
5 changes to the hydrology model that we've been
6 discussing here, as it related to shallow concentrated
7 flow and Manning's roughness coefficients.

8 Q And so I think one of the things that Manning's
9 roughness coefficient that Mr. Tucker was asking you
10 about, he specifically asked you a question about
11 Page 270, EP-2 Page 270.

12 A Okay.

13 Q So I guess that only includes three reach
14 names. Right? Dry Creek, Reach 2.0, and Reach 2.1?

15 A Correct.

16 Q Okay. Can you turn to page -- and on that
17 page, it shows Dry Creek 1, the watercourse length is a
18 thousand feet. Correct?

19 A That's correct.

20 Q And your Manning's roughness was 0.45?

21 A That's what it says.

22 Q Okay. Can you turn to Page EP-2, 95?

23 A Okay.

24 Q And part of how you came up with this
25 determination for your Manning's roughness, I believe,

1 is that you said you walked these various creeks when
2 you were out on the property. Is that right?

3 A Yes, sir.

4 Q Okay. So why on Page 95 does it show for Dry
5 Creek the Manning roughness as .065 versus Page 270,
6 .045?

7 A Hold on. I'm confused.

8 Q I'm comparing the two pages. You went over on
9 Page 270 with Mr. Tucker, and now I'm looking at Page
10 95.

11 A Oh, not 295?

12 Q No. Just EP-2, comma, 95.

13 A Okay. Sorry.

14 Okay.

15 Q Okay. So why are there two Manning roughness
16 numbers in this chart versus the other chart?

17 A You're referring to Dry Creek specifically?

18 Q Right. Because at one point, you said it's
19 .045, and then the other one you say it's .065.

20 A I can't recall why I decided that that needed
21 to be changed.

22 Q Okay. And when you say you walked these to
23 determine that, did you walk Dry Creek?

24 A Yes.

25 Q Did you walk Reach 2.0?

1 A I have to refer to what reach that's talking
2 about, but I believe I did.

3 Q Okay. Tell me what page you're going to look
4 at to refer to that reach.

5 A Okay. Now, you're talking about -- I got too
6 many pages over here now.

7 Your question was about reach -- on 270.
8 Right?

9 Q Right.

10 A Okay. So those reaches correspond -- on 270
11 correspond to Page 278.

12 Q Okay. Let me pull that up.

13 Okay.

14 A So you see there where it says Site 21 and a
15 triangle, and then there's a -- some wording there
16 beside that Dry Creek with an arrow pointing to Site 21
17 that connects to the Dry Creek junction?

18 Q Okay.

19 A That is the reach that I'm talking about there.

20 Q So where is this located on the map of the
21 Hunter tract?

22 A Do I need to keep these pages to reference back
23 to them?

24 Q You don't have to keep 278. You can fold that
25 one back up.

1 A Okay. I'm referring to Page 258.

2 Q Okay.

3 A Okay. And so generally we're talking about the
4 area between Site 21 reservoir and the outlet of DC2.

5 Q Okay. Where's the outlet of DC2?

6 A It's where the red line that illustrates the
7 watershed boundary of DC2, where that red line crosses
8 Dry Creek.

9 Q Okay. So -- and you walked the boundary of
10 that one?

11 A Yes.

12 Q Okay. And where is the -- on 270, you refer to
13 Reach 2.1. Where is that one at?

14 A So again, I'd refer back to Page 278 where it
15 shows Reach 2.1.

16 Q Okay.

17 A That's a schematic of the basins and reaches
18 and junctions.

19 Q And back on Page 258.

20 A So that would go from the confluence of UNT5,
21 and UNT4, downstream to the confluence of UNT2 and UNT3.

22 Q So UNT5 and UNT4 are off site. Right?

23 A Not entirely.

24 Q Okay. So the portions that you walked, was
25 that on property or off property?

1 A Well, I certainly didn't trespass any.

2 Q Okay. I'm just asking. That's how you came up
3 with your number, so I'm just curious we you walked.

4 So you walked in the permitted boundary?

5 A Yes.

6 Q Okay.

7 A Well, and on the -- I'd say on the Hunter tract
8 in general.

9 Q So if we look back at your chart on Page 95,
10 Reach 2.1 is not referenced on here. Correct?

11 A I doubt it is. I haven't looked at it yet.

12 Q Okay. I'll give you of a minutes.

13 A Okay. What Page was it again?

14 Q 95. EP-2, Page 95.

15 A Okay.

16 Q So Reach 2.1. is not referenced on here.
17 Correct?

18 A I don't see that there in the reach name, no.

19 Q Okay. And so can you tell me where Reach 3 is?
20 Are we going to stay on 258, or is there a different
21 map?

22 A There's a different map. Yeah. We're
23 comparing completely different analyses here.

24 Q Okay.

25 A So the one on, you know, like here on Page 95,

1 that is for the comparison of existing to
2 post-development drainage, so that's to determine that
3 there's no adverse alteration of drainage patterns,
4 where the one you referred to before is solely for the
5 floodplain determination in C2.

6 Q Well, I guess I don't understand. If you look
7 at Page 270. Right?

8 A Okay. Do you want me to go back to 270?

9 Q Sure.

10 A Okay.

11 Q The title of that document is "130
12 Environmental Park Kinematic Wave Routing Parameters,
13 Existing Watershed Characteristics." Right?

14 A Yes, sir.

15 Q Okay. And that's the one you have .045 at Dry
16 Creek as the Manning roughness coefficient?

17 A Yes, sir.

18 Q And it's a thousand feet in course length.
19 Correct?

20 A That's what it says.

21 Q Okay. So if we flip back over to Page 95, it
22 has the exact the same title, "130 Environmental Park
23 Kinematic Wave Routing Parameters, Existing Watershed
24 Characteristics." Correct?

25 A What page again? On 95?

1 Q Yeah.

2 A Okay. Which one am I looking at?

3 Q The title.

4 A Okay. Yep.

5 Q The two titles are exactly the same. Correct?

6 A They are.

7 Q They both say "Existing Watershed
8 Characteristics." Correct?

9 A That's correct.

10 Q And Dry Creek says a thousand feet, and the
11 Manning roughness coefficient changed now to .065.
12 Correct?

13 A Yes, that's correct.

14 Q Okay. So you think there's a different map
15 that shows these existing watershed characteristics, and
16 I was asking you about Reach 3.

17 A Okay.

18 And I'm sorry. What was the question?

19 Q Reach 3.

20 A Okay. Do you want me to show you the map
21 that --

22 Q Yeah.

23 A Okay. It's on Page 102.

24 Q Okay.

25 A I don't know if I would call this a map, but

1 it's a schematic.

2 Q Okay. I guess I'm not looking for the
3 schematic. I'm looking for where this is in
4 relationship to the Hunter tract.

5 A Reach 3?

6 Q Yes.

7 A Well, I believe that that's been left off of
8 this schematic here. It should be between CP2 and J2 in
9 the upper left-hand portion. You can see where we show
10 Reach 1, Reach 1A, Reach 2. And then there's a line
11 there that doesn't have a title. And then you go to
12 Reach 4, Reach 5. I believe that should be Reach 3.

13 Q Okay. Well, then let's just back up.

14 Reach 1, the first one we see on your
15 schematic on Page 102 --

16 A Okay.

17 Q -- where is that located in relationship to the
18 Hunter tract?

19 A Okay. Reach 1 -- so if you turn with me to
20 Page 89.

21 Q Okay. I'm just going to pull mine out so I
22 don't have to keep flipping. So hold on just a second.

23 Okay.

24 A So Reach 1 would go from CP1, which is at the
25 top of the page there on 89.

1 Q Okay.

2 A And that would represent the portion of channel
3 between CP1, and CP2.

4 Q And that channel you're referring to is that
5 blue dotted line -- or that blue solid line with the
6 arrow. Correct?

7 A I think there's two of them, but generally,
8 yes.

9 Q Did you walk that one?

10 A I don't recall walking that one. But you can
11 see that one's close to the road there. I certainly
12 drove around both Homannville Trail and 1185 to gather
13 whatever information I could from the right-of-way.

14 Q So was that outside the Hunter property tract
15 or inside it?

16 A That -- that reach?

17 Q Uh-huh.

18 A There's a portion of it that's inside. There's
19 a portion of it that's outside.

20 Q Okay. So when you were -- when Mr. Ryan was
21 asking you if you walked all of these to determine your
22 Manning's roughness coefficient, this is one you can't
23 remember whether you walked or not?

24 A No. I believe that you've mischaracterized
25 what Mr. Ryan asked me.

1 Q Okay. Tell me what you thought his question
2 was.

3 A He asked me how I determined the roughness
4 coefficients, and I said that I walked the streams. And
5 I believe I specifically said Dry Creek and the unnamed
6 tributary.

7 Q Okay. So this is one you may not have walked?

8 A I do not recall walking Reach 1 to its
9 entirety, no.

10 Q Okay. What about reach 1A?

11 A I don't recall that specifically. There's a
12 portion of that that would be on the Hunter tract. But
13 I don't specifically remember that area.

14 Q Okay. What about reach 2, did you walk that
15 one?

16 A I don't recall that, no.

17 Q Okay. How about reach 3?

18 A So the one -- are we agreeing that Reach 3 is
19 the one between CP2 and J2?

20 Q Yeah. If you're representing that's what you
21 think Reach 3 means, I can go with that.

22 A Yes.

23 Q Okay. You did walk that one?

24 A That would've been a portion of the unnamed
25 tributary.

1 Q Okay. What about -- so I'm assuming Reach 4
2 and 5 and Reach 8 all go into one, according to your
3 schematic. Correct?

4 A All go into one?

5 Q All go into -- it looks like Reach 3 goes to 4,
6 4 goes to 5, 5 goes to 8.

7 A That's what it shows.

8 Q Okay. Did you walk that entire length for that
9 portion?

10 A 4, 5, and 8?

11 Q Yes.

12 A I would say that I walked most of that. I
13 don't know that I followed the exact -- or I don't
14 recall if I followed the exact stream from one end to
15 the other in that area. But I walked most of that, yes.

16 Q And what about 7 and 6?

17 A I believe I did.

18 MR. MAGEE: I'm about to move on to a
19 different topic. Do you want me to keep going? I got
20 about, maybe, 30 minutes.

21 JUDGE QUALTROUGH: No. Let's break. What
22 we'll do is we're going to break for lunch and then come
23 back for Mr. Maroney, and then we'll pick up this
24 witness again.

25 MR. MAGEE: Okay.

1 JUDGE QUALTROUGH: So we're okay to break
2 now?

3 MR. MAGEE: I'm moving on, yeah, past
4 that.

5 JUDGE QUALTROUGH: So we'll adjourn for
6 lunch. We'll be back at 1:15.

7 (Lunch recess: 11:59 a.m. to 1:20 p.m.)
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1 AFTERNOON SESSION

2 THURSDAY, AUGUST 25, 2016

3 (1:20 p.m.)

4 JUDGE QUALTROUGH: It is 1:20. We are
5 back on the record on August 25th. Mr. Ryan, I believe
6 you have another witness to call.

7 MR. RYAN: Yes, Your Honor. We're going
8 to call Mr. Kerry Maroney to complete his testimony.
9 And for the record, we've asked to be able to do that by
10 telephone because Mr. Maroney has been advised by his
11 doctor not to travel from Wichita Falls, so we have a
12 telephone set up in here.

13 Mr. Maroney is on a telephone in his
14 office, and we would like to proceed with the rest of
15 his testimony by telephone.

16 JUDGE QUALTROUGH: And he's got the
17 exhibits?

18 MR. RYAN: He -- he has the Applicant's
19 exhibits in Volumes 1 through 7, and he has the exhibits
20 that Ms. Perales notified me this morning she intended
21 to use.

22 JUDGE QUALTROUGH: All right. Okay.
23 Good. Do you have any exhibits, Mr. Magee?

24 MR. MAGEE: No, Your Honor.

25 JUDGE QUALTROUGH: Okay. All right.

1 Mr. Maroney, let me swear you in again. All right?

2 THE WITNESS: All right.

3 (Witness Maroney sworn)

4 JUDGE QUALTROUGH: All right. We've
5 ended -- I believe -- well, we had cross-examination
6 from Plum Creek, the Executive Director, and I believe
7 OPIC has concluded its cross.

8 MR. TUCKER: Yes. OPIC has no more
9 questions. We pass the witness.

10 JUDGE QUALTROUGH: All right. We'll go to
11 TJFA.

12 PRESENTATION ON BEHALF OF APPLICANT (CONTINUED)

13 KERRY D. MARONEY, P.E.,

14 having been first duly sworn, testified as follows:

15 CROSS-EXAMINATION

16 BY MS. PERALES:

17 Q Good afternoon, Mr. Maroney.

18 A Good afternoon.

19 Q Can you hear me okay? This is Marisa Perales,
20 and we met before at your deposition. And I want to
21 thank you for making yourself available for
22 cross-examination today. And I'll try to keep it brief.

23 A Thank you. And I appreciate your indulgence.
24 I do.

25 Q No problem. So I want to begin just to get it

1 clear for the record, when you sealed the application,
2 you were doing so on behalf of Biggs & Mathews, Inc. Is
3 that right?

4 A That's correct.

5 Q Okay. And Biggs & Mathews, Inc. is different
6 and separate from Biggs & Mathews Environmental. Is
7 that right?

8 A Yes, ma'am.

9 Q And you are either a principal or employed by
10 both. Is that correct?

11 A I'm employed by Biggs & Mathews, Inc., and I'm
12 an officer and not an employee of Biggs & Mathews
13 Environmental.

14 Q Okay. So -- and you -- your position with
15 Biggs & Mathews, Inc. is as the principal engineer. Is
16 that right?

17 A President of the corporation, yes.

18 Q Of Biggs & Mathews, Inc.?

19 A Yes, ma'am.

20 Q Okay. And who are the other principals of
21 Biggs & Mathews, Inc.?

22 A There are no others.

23 Q Okay. Are there other professional staff
24 members for Biggs & Mathews, Inc.?

25 A Yes. Let me back up. They are titled, but

1 none of them own any part of the business.

2 Q Okay.

3 A So I have Kerry J. Maroney, which is my son.

4 Q Okay.

5 A Then Tyson Traw, and then James E. Biggs, the
6 III. That would be it.

7 Q Okay. And are Mr. Kerry J. Maroney, Mr. Traw,
8 and Mr. Biggs, are they all engineers as well?

9 A They are.

10 Q So it's my understanding that initially
11 Mr. Welch was the engineer of record for this
12 application. Is that right?

13 A Yes, ma'am.

14 Q And you took over before the entire application
15 was submitted to TCEQ. Is that right?

16 A Yes, ma'am.

17 Q Did you have any involvement in preparing the
18 application for the transfer station registration?

19 A Yes, I did.

20 Q Were you the engineer of record for that
21 application?

22 A Yes, ma'am.

23 Q Okay. As the engineer of record -- and I'm
24 referring to -- right now I have in front of me your
25 prefiled testimony, which is Applicant's Maroney 1.

1 Do you have that with you?

2 A Yeah. Let me pull that out. Okay. I have it.

3 Q Great. So I'm on Page 7 of your testimony.

4 A All right.

5 Q And starting at Page 13, you refer to the rules
6 that are applicable to the subject matters in the
7 application that you were responsible for. Is that
8 right?

9 A I'm sorry. Ask that question again.

10 Q Sure. I'm just kind of setting the context
11 really by referring to the response you provided on Line
12 13 wherein you say that you've listed the rules that are
13 applicable to the subject matters in the application for
14 which you were responsible. Is that right?

15 A Yes, ma'am.

16 Q And among the rules that you listed at Line 34
17 is Rule 330.57, Subsection F. Is that right?

18 A Yes, ma'am.

19 Q And this subsection addresses conformance with
20 the Texas Engineering Practice Act and Texas Geoscience
21 Practice Act. Right?

22 A Yes, ma'am.

23 Q So what did you do as the engineer of record to
24 ensure that the requirements of the Texas Geoscience
25 Practice Act were -- were conformed with?

1 A I did not do anything on that.

2 Q Okay.

3 A I am not part of the Texas Geoscience Practice
4 Act.

5 Q Okay. So any seals by a professional
6 geoscientist that are included in the application,
7 you're not taking responsibility for those. Is that
8 right?

9 A No, ma'am, I'm not.

10 Q Okay.

11 A That would be Mike Snyder.

12 Q Okay. And did you do anything to ensure that
13 he was conforming with the requirements of the Texas
14 Geoscience Practice Act?

15 A No.

16 Q So you were ultimately responsible for Parts 1
17 and 2 of the application. Is that right?

18 A Yes, ma'am.

19 Q So what, if anything, did you do to determine
20 whether there were any location restrictions that apply
21 to the proposed landfill?

22 A I'm pulling that document out. Just a minute,
23 please.

24 Q Okay.

25 A I looked at the location of the proposed

1 landfill and its footprint in the other facilities and
2 then compared those to the various rules and restriction
3 requirements set forth in the Texas Administrative Code.

4 Q Okay.

5 A All part of the easements and buffer zones of
6 airport restrictions, floodplains, and I believe there
7 was a couple of others that I did. Certification of
8 Compliance, I think was also one that I executed for
9 Type 1 and Type 4 landfills.

10 Q Okay.

11 A And then also I signed and sealed the Coastal
12 areas.

13 Q The what? I'm sorry.

14 A I'm sorry. The Coastal areas restrictions.

15 Q Okay. So you mention that you looked at the
16 landfill footprint and other facilities. What other
17 facilities associated with the landfill are you
18 referring to?

19 A Specifically the landfill footprint, but also
20 there's other ancillary facilities or support facilities
21 on that site also.

22 Q Okay. So would the access road be a facility
23 that's associated with the landfill footprint?

24 A The landfill entrance road would be a support
25 facility.

1 Q And are you aware whether the access road is
2 proposed to cross a floodplain?

3 A I'm sorry. Repeat that question.

4 Q Sure.

5 Are you aware that the access road or the
6 entrance road is proposed to cross a floodplain?

7 A I believe that proposed road does cross a
8 floodplain, I believe, in a couple of places.

9 Q Okay. And is that something that you
10 considered when looking at TCEQ location restrictions as
11 it relates to the landfill footprint and associated
12 facilities?

13 A I think the location restrictions deal strictly
14 with the landfill footprint, but Mr. Traw, Tyson Traw,
15 addressed the landfill or the floodplain crossings for
16 the entrance road.

17 Q Okay. Did you visit the proposed landfill site
18 before you -- you put your seal on any portion of the
19 application?

20 A Yes. I had -- I actually had a couple of
21 visits to the site, as best I recall, at least two
22 visits.

23 Q Okay. And do you recall during your site visit
24 observing the presence of a reservoir and dam?

25 A I do recall that.

1 Q And so you were aware that there was a dam and
2 a reservoir on the property. Is that right?

3 A Yes, ma'am, I was.

4 Q Do you have a copy of Protestants' Exhibit 22
5 with you?

6 A I believe I do. Just one moment.

7 Q Okay.

8 A 22, did you say?

9 Q Yes, sir, 22.

10 A Okay.

11 Q So can you --

12 A I do have it.

13 Q And do you recognize this document?

14 A I'm sorry. I didn't understand that.

15 Q Do recognize this document?

16 A Yes.

17 Q This is a document that you sealed. Isn't that
18 right?

19 A I did.

20 Q And if you turn to Page 4 of this document --

21 A Okay.

22 Q -- and look at the very bottom of that page,
23 there's a deficiency or a request for more information
24 by the Executive Director in which the Executive
25 Director -- or the permit reviewer asks to, "Please

1 provide and address for the on-site easement holder on
2 the landowner's list in Part 1, Appendix B." Do you see
3 that?

4 A Yes, ma'am.

5 Q And do you recall whether you indeed provided
6 the address for the on-site easement holder on that
7 portion of the application?

8 A Let me look and see. Let me read the response.

9 Q Okay.

10 A Yes, ma'am, I believe I did.

11 Q Okay. So you believe you identified Plum Creek
12 Conservation District in response to the deficiency
13 noted in No. 8?

14 A I identified it in the -- on the facility's
15 site plan, 2A.12 --

16 Q Okay.

17 A -- in a Note No. 9.

18 Q Okay. But in response to this deficiency on
19 P22 that we're looking at, isn't it true that you
20 responded that those records, being the real property
21 appraisal records, do not include information on names
22 or addresses of holders of easements on the site. Do
23 you see that statement?

24 A Ask that question again.

25 Q Sure.

1 I'm referring to Page 5 of the Exhibit 22.

2 A Okay.

3 Q And the last sentence in that first full
4 paragraph, it states, "Those records" -- referring to
5 real property appraisal records -- "do not include
6 information on names or addresses of holders of
7 easements on the site."Do you see that?

8 A Yes, I do.

9 Q Okay. Do you know what type of authority --
10 well, first of all, let me back up. Do you know who
11 holds that easement for the -- on the site?

12 A I'm not for sure.

13 Q Okay. Are you familiar with the entity known
14 as Plum Creek Conservation District?

15 A To some extent, yes, ma'am.

16 Q Okay. Do you know what authority Plum Creek
17 Conservation District has generally?

18 A To the best of my knowledge, it is a flood
19 control authority.

20 Q Okay. Do you know if they have any groundwater
21 authority?

22 A I do not know that.

23 Q Okay. Do you know if they have any authority
24 or responsibility for maintenance of the dam that's on
25 the -- next to the proposed landfill footprint?

1 A I don't know that.

2 Q Okay. As the engineer of record, who is
3 responsible for the application for the proposed
4 landfill, do you think that's an important piece of
5 information to know about?

6 A I'm not sure I can respond to that one way or
7 another.

8 Q Okay. So you mentioned that in looking at the
9 TCEQ location restrictions, you considered the TCEQ rule
10 regarding floodplains in relation to the proposed
11 landfill footprint. Is that right?

12 A Yes, ma'am.

13 Q And you mentioned that you were at least aware
14 that the entrance road could cross a floodplain. Is
15 that right?

16 A I believe I was aware of that. Yes, ma'am.

17 Q Okay. Have you made any -- have you taken any
18 steps to seek any sort of authorization or conditional
19 letter of map revision from FEMA?

20 A I have not.

21 Q Have you taken any steps to obtain an
22 authorization or a floodplain development permit from
23 Caldwell County?

24 A I have not.

25 Q Have you had any meetings with any officials or

1 floodplain administrator for Caldwell County?

2 A No, ma'am.

3 Q Can you -- do you have Protestants' Exhibit 23?

4 A Okay. Hold on one minute.

5 Q Okay.

6 A Okay. I do have it.

7 Q Let me make sure I have it.

8 A Yes. I have it. Is that what you asked?

9 Q I did, but now I'm checking to see if I have
10 it.

11 A Oh, okay. Do you want me to send it to you?

12 Q Would you mind?

13 (Laughter)

14 Q (BY MS. PERALES) Okay. Now I have it. Sorry
15 about that.

16 Okay. So on P23 --

17 A I'm sorry, on page what?

18 Q Let's see. I'm on Page 3. And I'm looking at
19 Comment No. 4. Can you take a look at that, please?

20 Have you had a chance to look at that?

21 A Yes. I'm reading it through right now.

22 Q I'm sorry. Go ahead. Take your time.

23 A Okay.

24 Q Okay. So in a nutshell, does this deficiency
25 or this request for information ask for a demonstration

1 that the proposed construction has a floodplain
2 development permit from the city, county or other agency
3 with jurisdiction?

4 A It does.

5 Q And the response indicates that the preliminary
6 platting process has begun. Is that right?

7 A That's correct.

8 Q So -- and you sealed this particular response
9 to the Notice of Deficiency. Isn't that right?

10 A I'm sorry. Repeat that question.

11 Q You sealed this response to the Notice of
12 Deficiency. Is that right?

13 A I did, but I also relied on Tyson Traw to -- as
14 the drainage professional -- the floodplain specialist
15 to address that.

16 Q Okay. So other than talking to Mr. Traw, did
17 you do anything to respond to this particular Notice of
18 Deficiency comment?

19 A No.

20 Q And to be clear, you -- you yourself have taken
21 no steps to obtain the floodplain development permit
22 from the county or other agency with jurisdiction. Is
23 that right?

24 A That's correct.

25 Q Now, do you have P24 in front of you?

1 A I'm sorry?

2 Q P24.

3 A I will pull that. Okay. I do have it.

4 Q Can you turn to -- let's see. I guess the
5 first page. And here again, on the first page, you were
6 asked about the -- about obtaining a floodplain
7 development permit from the county or other agency with
8 jurisdiction. Isn't that right?

9 A Yes, ma'am.

10 Q And in responding to this NOD, did you again
11 just rely on Mr. Traw?

12 A Yes, ma'am.

13 Q Do you know whether, today, the Applicant has
14 taken any steps to obtain a floodplain development
15 permit from the county or other agency?

16 A To a limited extent as to what Mr. Traw has
17 conveyed to me the fact -- or supposedly a preliminary
18 plat has been approved by Caldwell County. But to my
19 knowledge, I do not believe that a floodplain plan has
20 been approved.

21 Q Okay. Did you have any meetings with anyone
22 from TCEQ between the day of your -- of your last NOD
23 response and the date that the draft permit was issued
24 related to this requirement to obtain a floodplain
25 development permit?

1 A No.

2 Q Okay. So you made no request to TCEQ to simply
3 include a special provision in the draft permit?

4 A No, ma'am, I did not.

5 Q Have you made any attempt to obtain additional
6 information regarding the Site 21 Dam and Reservoir
7 that's located near the proposed landfill footprint?

8 A Ask that question again.

9 Q Have you made any attempt to collect additional
10 information regarding the Site 21 Dam and Reservoir near
11 the proposed landfill footprint?

12 A No, ma'am.

13 Q Have you conducted any evaluation of Site 21?

14 A No, ma'am.

15 Q Were you aware that the Site 21 Dam has been
16 designated as a high-hazard dam?

17 A I was aware of that through Mr. Traw.

18 Q Okay. Have you ever been provided with any
19 construction plans for the dam?

20 A I have not.

21 Q I'm going to switch topics now and ask you to
22 pull Exhibit P21.

23 A Okay.

24 Q So on P21, I'm looking at Page 2, and I'm
25 looking at the Deficiency No. 6. Can you take a minute

1 to review that comment?

2 A Okay. Give me just a minute.

3 Q Sure.

4 A Okay.

5 Q Okay. So this comment states that -- that Rule
6 330.59, Subsection E requires that you provide a list of
7 persons with more than 20 percent ownership in the
8 facility. And then it goes on to say that if the sole
9 owner and operator of the proposed facility is 130
10 Environmental Park, LLC, then provide a list of all
11 individuals that own more than 20 percent of the
12 corporation. Is that right?

13 A That's what the -- that's what No. 6 says, yes.

14 Q Okay. Did you take any steps to provide the
15 Executive Director with the requested list of
16 individuals who own more than 20 percent of 130
17 Environmental Park, LLC?

18 A No.

19 Q Do you know if there are individuals or other
20 entities who own more than 2 -- 20 percent of 130
21 Environmental Park, LLC?

22 A The corporation itself?

23 Q Yes.

24 A I do not, no.

25 Q Okay. Do you know if Green Group Holdings owns

1 more than 20 percent of 130 Environmental Park, LLC?

2 A No, ma'am, I do not.

3 Q Do you know if Phillips & Jordan owns more than
4 20 percent of 130 Environmental Park, LLC?

5 A I do not, no.

6 Q Do you know whether Herzog owns more than
7 20 percent of 130 Environmental Park, LLC?

8 A I do not, no.

9 Q And did you make any inquiries at all as to who
10 may own any portion of 130 Environmental Park, LLC?

11 A No, ma'am, I do not.

12 Q Did you have any discussions with -- with
13 anyone from TCEQ regarding how to respond to this
14 particular comment?

15 A No.

16 Q Okay. At the time that you came on board and
17 became the engineer of record for this landfill
18 application, who did you understand your client to be?

19 A HHNT.

20 Q Okay. And who did you understand the proposed
21 operator of the landfill to be?

22 A I understood that to be 130 Environmental Park,
23 LLC.

24 Q And did you have any idea of individuals who
25 might be associated with 130 Environmental Park, LLC and

1 competent to operate the proposed facility?

2 A I was aware of Ernest Kauffman at that point in
3 time.

4 Q Okay. And do you -- do you know Mr. Kauffman?

5 A I know -- I know of him. I don't know him
6 personally.

7 Q And is it your understanding that Mr. Kauffman
8 is a principal or president of 130 Environmental Park,
9 LLC?

10 A I believe I -- I believe that's what I
11 understood at that time, yes.

12 Q In fact, in order to address the TCEQ
13 requirement that requires evidence of competency to
14 operate the facility, didn't you have to inquire about
15 who that person would be?

16 A Yes, and I believe we listed those from -- from
17 what I understood is a part of 6.1 of the management
18 personnel.

19 Q So how did you -- how did you come to know
20 Mr. Kauffman and his background?

21 A Through a couple of meetings that I attended at
22 the site sometime late in 2013.

23 Q And so did you meet Mr. Kauffman at that time?

24 A As I recall, it would have been somewhere
25 around that time. Yes, ma'am.

1 Q And did you inquire about his background in
2 order to determine whether he satisfied the evidence of
3 competency requirement?

4 A No, ma'am. He provided that -- provided us
5 with that information to include in the application.

6 Q Okay. So you didn't have any personal
7 knowledge of the information about Mr. Kauffman's
8 background that was included in the application?

9 A No, ma'am.

10 Q So did you basically just copy and paste the
11 information he gave you?

12 A I put in the application what he provided us as
13 being assuming, and I relied on him that he was
14 knowledgeable and understood the --

15 THE REPORTER: I'm sorry. I lost that
16 last part. I didn't hear him.

17 THE WITNESS: I said I relied on him to
18 provide me that information to put in the application.

19 Q (BY MS. PERALES) What about Mr. Oscar Allen;
20 do you know Oscar Allen?

21 A No, ma'am, I don't.

22 Q Do you know whether he has any position with
23 130 Environmental Park?

24 A I do not know that.

25 Q What about Mr. Thad Owings; do you know

1 anything about Mr. Owings?

2 A No, ma'am.

3 Q Do you know what his relationship is, if any,
4 with 130 Environmental Park?

5 A I do not.

6 Q Have you met Mr. Allen or Mr. Owings?

7 A I don't -- neither one.

8 Q Okay. Do you know if Mr. Kauffman is also
9 employed by or a principal of Green Group Holdings?

10 A I don't know his relationship or capacity at --
11 with Green Group Holdings.

12 Q Do you know anything about Mr. Kauffman's
13 relationship with Pintail?

14 A No, ma'am.

15 Q I believe I read in your prefiled exhibits that
16 you worked for Texas Water Development Board. Is that
17 right?

18 A No, ma'am.

19 Q No?

20 A I provide -- services -- I don't work for the
21 Texas Water Development Board -- I think probably -- let
22 me look, but probably what I was talking about was the
23 regional water plant, which is --

24 Q Okay.

25 A -- Texas Water Development Board -- it comes

1 out of the Texas Water Development Board for -- and I
2 was a prime consultant for Region B.

3 Q Okay. I see. So you must work with ground
4 water districts, then. Is that right?

5 A I'm sorry?

6 Q You must work with ground water districts?

7 A I do have -- I'm not employed -- or I don't
8 have any type of contract with -- with the water --
9 ground water districts, but I do work with them as it
10 relates to regional water plants.

11 Q Okay. When you put your professional
12 engineering seal on a document, what is it that you are
13 signifying by that seal?

14 A That I've -- that I'm familiar with the
15 document that I'm signing, and I had ultimate control
16 over the work that was provided and/or relied on the
17 professional -- other professionals of record to produce
18 me that information.

19 Q So are you indicating that you have personal
20 knowledge of the contents of the document that you've
21 sealed?

22 A I would have -- I would have personal
23 knowledge, and they would be operating under my control
24 and supervision.

25 Q Okay. So you would also have supervision of

1 the preparation of the documents?

2 A Yes, ma'am.

3 Q And would you also have final review of
4 documents that bear your seal?

5 A Yes, ma'am.

6 Q I didn't hear your answer.

7 A I'm sorry. Yes, ma'am.

8 Q Okay. So you were also responsible for the
9 preparation of the site operating plan. Is that right?

10 A Yes, ma'am.

11 Q Okay. I'm going to ask you a few questions
12 about that, and I think that's in what's -- one of the
13 volumes of the application.

14 A Let me find it.

15 JUDGE QUALTROUGH: It's Volume 4.

16 Q (BY MS. PERALES) So we've determined it's in
17 Volume 4.

18 A Okay. I have it.

19 Q Okay. Great. And it appears it begins on
20 Page 99. Is that right?

21 A Yes. That would be the -- now, Page 99 would
22 be the cover page.

23 Q And this is the cover page that you signed and
24 sealed. Right?

25 A Yes, ma'am.

1 Q So let's start with Page 105.

2 A Okay.

3 Q On Page 105 -- let's see. The third paragraph,
4 the third sentence, "Describe some of the support
5 facilities." Do you see that sentence?

6 A I'm sorry. Repeat that.

7 Q Yes. The third full paragraph, the third
8 sentence, it lists support facilities. Do you see that?

9 A Yes, ma'am, I do.

10 Q Okay. And the first support facility is the
11 site entrance road. Is that right?

12 A Yes, ma'am.

13 Q And is it your understanding that the site
14 entrance road, as it exists within the permit boundary
15 does not extend all the way to 183?

16 A Let me look, but I believe it does extend
17 the -- are you talking about the entrance road itself,
18 does it extend to 183?

19 Q Yes. I'm talking about the entrance road
20 itself, and I'm talking about the facilities that are
21 included within the permit boundary.

22 A As I look at general site plan drawing 288, it
23 shows the entrance road does extend to Highway 183.
24 However, if the question is the entrance road does
25 not -- it does go outside the facility boundary --

1 Q Okay.

2 A -- if I understood your question, but the
3 entrance road goes all the way to 183.

4 Q But the boundary of the facility doesn't go all
5 the way to 183. Is that right?

6 A I think that's correct.

7 Q So the -- the part of the entrance road that
8 would be included within the permitted area does not
9 extend to 183. Is that right?

10 A That's correct.

11 Q So remaining on the facilities that are listed
12 here, the transfer station is not listed. Isn't that
13 right?

14 A The transfer station is not listed in that
15 paragraph there.

16 Q Okay. Do you know whether the transfer station
17 is going to be constructed and operated?

18 A I assume that it will, but I don't know that.

19 Q So did you contemplate the operation of the
20 transfer station when you were putting together the site
21 operating plan?

22 A In the -- the transfer station has a separate
23 registration and has a separate site operating plan.

24 Q Okay. But if the transfer station were
25 constructed and if the proposed landfill were

1 constructed and operated, wouldn't the transfer station
2 be operated in coordination with the proposed landfill?

3 A Ask that question again.

4 Q Sure.

5 Wouldn't the transfer station be operated
6 in coordination with the proposed landfill?

7 A Yeah, it can be.

8 Q Do you know whether the waste acceptance rates
9 that are included in the application take into account
10 the waste transfer station waste acceptance rates?

11 A I believe they do.

12 Q Okay. So you believe that the waste acceptance
13 rates that are included in the application also include
14 waste that will be accepted at the transfer station?

15 A It would be included in the 1500 tons per day
16 to start with. It could include wastes from the
17 transfer station.

18 Q Okay. So the 1500 tons per day that's
19 estimated at the beginning of the site life for the
20 landfill, those waste acceptance rates are also intended
21 to address the transfer station?

22 A I believe they can accommodate the transfer
23 station.

24 Q Okay. What were those waste acceptance rates
25 based on?

1 A The waste acceptance rate was actually provided
2 to us by Environmental Park, 130 Environmental Park,
3 LLC.

4 Q By who?

5 A The -- I believe it was Bill Hodges with --

6 Q And what is Bill Hodges' role or relationship
7 with 130 Environmental Park, LLC?

8 A I believe he was -- he had contracted -- Bill
9 Hodges with HHNT had contracted with the 130
10 Environmental Park, LLC.

11 Q So is Bill Hodges with HHNT or is he a
12 principal or other officer of 130 Environmental Park?

13 A It's my understanding that he is the officer
14 with HHNT.

15 Q Okay. So the waste acceptance rates were
16 provided to you by HHNT?

17 A Yes, which was our client.

18 Q What, if anything, did you do to verify the
19 reliability of those waste acceptance rates?

20 A I didn't do anything.

21 Q Okay. So I'm going to ask you to turn to
22 Page 139 of the site operating plan.

23 A Okay. 139, did you say?

24 Q Yes.

25 A Okay.

1 Q At the top, the first full paragraph, it states
2 that the site operations are proposed 24 hours per day.
3 Do you see that?

4 A Yes, ma'am, I do.

5 Q So who came up with those operating hours?

6 A I believe, again, that was provided to us by
7 Bill Hodges.

8 Q Okay. So did you have any role in coming up
9 with the operating hours?

10 A No, ma'am.

11 Q Do you have an opinion about whether operation
12 24 hours a day will generate noise that may be
13 disruptive to the neighboring residents?

14 A I do not.

15 Q Have you considered whether 24/7 operating
16 hours may generate light or light activity that could be
17 considered disruptive to the residents?

18 A No, ma'am.

19 Q Would you agree with me that operation of heavy
20 equipment in the middle of the night could be disruptive
21 to residents living nearby?

22 A I think that's possible.

23 Q Okay. Would you have any objection to limiting
24 the operating hours if this permit were granted?

25 A I'm sorry. Repeat that question, please.

1 Q Would you have any objection to limiting the
2 operating hours if this permit were granted?

3 A That wouldn't be my decision. That would be up
4 to the Applicant.

5 Q Okay. And who specifically would be
6 responsible for making that type of decision?

7 A It would be Environmental Park -- 130
8 Environmental Park, LLC.

9 Q Okay. And which officers of 130 Environmental
10 Park have that decision-making authority?

11 A I don't know that.

12 Q Okay. Do you know whether 130 Environmental
13 Park, LLC intends to -- intends to seek authorization to
14 use alternative daily cover if this permit is granted?

15 A I think -- it was my understanding from some
16 point in time from the -- that they will or they may use
17 alternate daily cover with approval of TCEQ.

18 Q Okay. Do you know what type of alternative
19 daily cover is being considered?

20 A No, I do not.

21 Q Do you have any experience with operation of a
22 landfill that has used alternative daily cover?

23 A I have had a small amount that was more a bale
24 fill as opposed to a landfill.

25 Q A what? I'm sorry. I didn't hear that.

1 A A bale fill where they bale the waste is the
2 only experience that I've had, and they put it in square
3 or rectangular bales and wire it up. That's the only
4 experience that I've had or have seen in alternate daily
5 cover.

6 Q Okay. And what kind of alternate daily cover
7 did they use?

8 A I'm not familiar with the products
9 specifically. It was basically a spray-on type of --
10 almost a paper mache product, but I'm not -- again, I'm
11 not familiar enough with it. I just know it was used
12 for a period of time.

13 Q Do you know whether alternate daily cover can
14 also encompass the use of tarps?

15 A I'm not aware of that.

16 Q Okay. If this permit were granted and a
17 special provision were proposed that would require a
18 major amendment before alternative daily cover could be
19 used, would you have any objection to that?

20 A That would not be my decision. That would be
21 Environmental Park's decision.

22 Q Okay. Is it your understanding that TCEQ rules
23 require that potable water be provided at the facility?

24 A I believe I'm familiar with the fact that TCEQ
25 requires facilities for -- sanitation facilities for the

1 employees.

2 Q Okay. And do you recall what kind of potable
3 water is proposed to be provided in the site operating
4 plan?

5 A Hold on a minute. Let me look. The site
6 operating plan in 8.29, bottled water will be provided
7 for the potable water, and portable sanitary facilities
8 will be provided.

9 Q And do you recall whether the transfer station
10 will also be relying on bottled water to provide potable
11 water?

12 A In the second sentence there, I -- it does talk
13 about bottled water will be provided for potable water.

14 Q Okay. And is that also what you recall the
15 transfer station relying on? Does the transfer station
16 also rely on bottled water for potable water?

17 A I don't recall.

18 Q Okay. And is it then your opinion that bottled
19 water is sufficient to comply with the regulation that
20 requires potable water?

21 A For the employees, yes.

22 Q Okay. Do you know whether 130 Environmental
23 Park has -- has sought any water supply for the proposed
24 landfill and transfer station?

25 A I'm sorry. Ask that question again.

1 Q Have they taken any steps to obtain a water
2 supply contract for the transfer station and landfill?

3 A I assume they have in that Polonia Water Supply
4 Corporation has agreed to serve them based on the
5 conditions of their tariff, so my assumption is that
6 they have been contacted for water service.

7 Q And what is your assumption based on?

8 A On an October 24th letter, 2014, from Polonia.

9 Q Okay. Did you have any communications with
10 Polonia?

11 A No, ma'am.

12 Q So who would have been responsible for
13 obtaining the water supply for Polonia?

14 A It would be 130 Environmental Park, LLC.

15 Q Okay. And do you know which individual?

16 A The only one I know of was -- or that I -- I
17 actually sent information to on some water demands was
18 Mack Reynolds.

19 Q Okay. And do you know who Mack Reynolds works
20 for?

21 A No, I don't.

22 Q The TCEQ rules also require that you provide
23 sufficient water for firefighting purposes. Isn't that
24 right?

25 A They require you provide fire protection and

1 firefighting capabilities at the landfill, which may or
2 may not include water.

3 Q Okay. But in this case it does include water,
4 doesn't it?

5 A Yes, ma'am.

6 Q And, in fact, if we turn to Page 133 of the
7 site operating plan --

8 A Okay.

9 Q -- and if we look at Bullet Point 3 -- the
10 third bullet point at the top of the page, do you see
11 where it states, "The supply of water under pressure is
12 provided from the above ground water storage tank
13 located at the transfer station"?

14 A Yes, ma'am.

15 Q So what happens if the transfer station is
16 never constructed?

17 A They would and could still supply above ground
18 storage for fire protection.

19 Q Okay. And where would that be located?

20 A It could be located adjacent to or in that area
21 near the proposed transfer station.

22 Q Would that require any sort of modification to
23 the permit -- to the landfill permit?

24 A I'm not sure about that.

25 Q And at the top of the page -- let's see. The

1 first bullet point on the same page, it states, "The
2 supply of water under pressure is provided by a water
3 truck." Do you see that?

4 A I do.

5 Q Where is -- where will the trucks obtain their
6 water from?

7 A They could actually get it from Polonia.

8 Q Okay. And is that your understanding of where
9 they were going to get it from?

10 A It is -- that is my understanding.

11 Q Okay. And is it also your understanding that
12 that water supply will be under pressure?

13 A It would be my understanding that if they get
14 water from Polonia Water Supply Corporation, they are
15 required to provide pressure at those locations --

16 Q Okay.

17 A -- for continuous and adequate service.

18 So my assumption is that if, in fact,
19 Polonia serves them -- and I believe they've agreed to
20 serve them, then that water would be under pressure,
21 yes, ma'am.

22 Q Okay. I'm going to ask you to turn to 130EP-1
23 and take a look at Page 89.

24 A I'm sorry. Now give me that again.

25 Q Yes. 89.

1 A Page 089.

2 Q Yes, sir.

3 A Okay.

4 Q And I'll direct you to Subsection 1.2 where it
5 says, "Site-specific conditions." Do you see that?

6 A Yes, I do.

7 Q Is this a part of the application that you were
8 responsible for?

9 A I did execute and sign and seal the cover page
10 for this portion of the existing conditions or the
11 narrative.

12 Q Okay. So what steps, if any, did you take to
13 investigate or search for abandoned oil wells?

14 A I relied on Mike Snyder to determine that.

15 Q Okay. So did you do anything yourself to
16 ensure that there were -- that all of the abandoned oil
17 wells had been accounted for?

18 A No, ma'am.

19 Q Did you have any discussions with the property
20 owner?

21 A I did not.

22 Q Okay. I'm going to turn you now to Page 73.

23 A 73, did you say?

24 Q 73. I'm trying to get there myself.

25 JUDGE QUALTROUGH: Exhibit 1.

1 MS. PERALES: Exhibit 1. Oops. That
2 might not be the right page.

3 THE WITNESS: Okay. I'm on 73.

4 Q (BY MS. PERALES) Okay. I might have the wrong
5 page. So give me just one second, and I'll confirm that
6 I'm where I need to be. I'm sorry. Give me one second.
7 You know, I was on the right page the first page. It's
8 Page 089.

9 A 089. Okay.

10 Q And that same paragraph you were looking at,
11 1.2, the last sentence there. It states that, "There
12 are no existing site-specific conditions that require
13 special design considerations or possible mitigation of
14 conditions." Do you see that?

15 A Yes.

16 Q So what did you do to ensure the accuracy of
17 this statement?

18 A Relied on the -- Mike Snyder on the geology,
19 Gregg Adams on the geotechnical -- on the drainage
20 facility.

21 Q Okay. Did you do anything yourself to ensure
22 that there were no site-specific conditions that
23 required special design considerations or mitigation?

24 A No, ma'am.

25 Q Okay. So do you or does Biggs & Mathews, Inc.

1 have a document retention policy?

2 A Yes.

3 Q And what is that? Can you summarize for us
4 what that policy is?

5 A In general, for most of our projects, if not
6 all of our projects, once we submit the plan or -- as
7 far as the projects, then we typically do not keep any
8 other drafts or prior submissions to that.

9 Q Could you -- I lost the last part of your
10 answer.

11 A I was just saying once we do make a submission
12 on a project for final submission, we typically do not
13 keep any of the previous markups or draft documents.

14 Q Okay. And what do you consider the final
15 submission?

16 A Typically, any response to our clients and/or
17 the regulatory agency, once that's completed, then those
18 documents are no longer retained.

19 Q Okay. So you would retain the documents
20 until -- in a case like this, you would retain your
21 documents until you've finished responding to the TCEQ's
22 inquiries. Did I understand that right?

23 A I'm sorry. Ask that again.

24 Q Well, I'm just trying to make sure I understood
25 your testimony. Is your policy to retain the documents

1 up until you've responded to the TCEQ's inquiries?

2 A I guess what I'm saying is once we respond to
3 either the regulatory agency or a -- a client, then --
4 then any of the previous drafts we no longer retain.

5 Q Okay. So my question had to do with what you
6 consider a final submission. In a project such as the
7 130 Environmental Park proposed landfill project, at
8 what point do you consider a final submission having
9 been completed?

10 A Well, assuming that we're -- I mean, let's just
11 take it in small bites. If it's a particular NOD, then
12 the previous drafts were destroyed. And then once we
13 get to technically complete, any of the other previous
14 submissions, we no longer keep.

15 Q Okay. So -- so that sounds to me like a policy
16 that addresses destruction of documents. I wonder if
17 you have a policy that addresses retention of documents.

18 A I'm not -- I'm not sure that I can answer that.
19 I guess the answer is going to be no.

20 Q Okay. And the policy that you just explained
21 to us, is that a written policy?

22 A No, ma'am.

23 Q So how would that policy be conveyed to
24 Mr. Traw and to Mr. Maroney and to Mr. Biggs?

25 A Through just verbal conversation or

1 discussions.

2 Q Okay. So you would just inform them that once
3 they've responded to an NOD, for instance, then they
4 should discard earlier drafts. Is that right?

5 A Right.

6 Q Okay. And is it your opinion that that is a
7 practice that complies with the Texas engineering
8 requirements?

9 A I would think that it would.

10 Q Okay. Do you know for sure?

11 A I'm not sure that that actually gets addressed
12 in the -- in the professional act.

13 Q Have you ever checked?

14 A No.

15 Q Do you know whether destruction of drafts
16 complies with the TCEQ rules?

17 A I do not, no.

18 Q Okay. And have you ever checked?

19 A No.

20 Q What about the Board of Professional
21 Geoscientists requirements? Are you familiar with those
22 requirements?

23 A I am not familiar with those requirements.

24 Q So you wouldn't know what their policies are
25 regarding retention of -- of drafts and samples and

1 other documents?

2 A No, ma'am, I do not.

3 Q I think I'm almost finished. Let me just look
4 through my notes real quick.

5 All right. Thank you, Mr. Maroney.

6 MS. PERALES: I will pass the witness.

7 I do hope you're feeling better.

8 THE WITNESS: Thank you.

9 JUDGE QUALTROUGH: Mr. Magee, how much do
10 you have.

11 MR. MAGEE: I have two really small areas.

12 JUDGE QUALTROUGH: Okay.

13 MR. MAGEE: Really small.

14 JUDGE QUALTROUGH: Okay.

15 CROSS-EXAMINATION

16 BY MR. MAGEE:

17 Q Mr. Maroney, my name is Eric Magee. Can you
18 hear me okay?

19 A Just barely. Is it possible to be a little
20 clearer?

21 Q Sure. I talk really loud naturally. Now can
22 you hear me?

23 A Yes. That helps.

24 Q Okay. My name is Eric Magee, and I represent
25 Caldwell County. How are you?

1 A I'm fine.

2 Q Thank you again for making yourself available.

3 A Well, I appreciate the -- the -- everybody's
4 indulgence. This is uncomfortable for everybody, I'm
5 sure.

6 Q I really have two brief questions for you. One
7 question is I -- I thought I understood during some
8 questioning by Ms. Perales regarding water demands at
9 the site -- do you recall that line of questioning?

10 A I do.

11 Q And it was my understanding that you said you
12 had some sort of correspondence or communication with
13 Mack Reynolds concerning water demands?

14 A Yes, sir. I believe that's true.

15 Q What -- what water demands did you evaluate or
16 determine were necessary for the site?

17 A In consultation with Gregg Adams, his -- we --
18 we tried to make some determination on water usage as it
19 related to monthly usage for landfill construction and
20 work at the landfill site itself.

21 Q Okay. So those water demands were for -- that
22 water was going to be used for construction purposes?

23 A It could be. Yeah. We tried to include about
24 anywhere from 250,000 to 300,000 gallons per month.
25 That would include for construction and operations.

1 Q That includes potable water. Right?

2 A Yes, it does.

3 Q So your estimation was 250 to how many gallons?

4 A Between 250,000 to 300,000 a month. That would
5 also include water for dust control and, you know,
6 some -- some amount for landscaping. I also think at
7 some point in time they anticipated the platting of
8 that -- the final platting or preliminary platting and
9 final platting of that development. And so what -- and
10 at some point in time, that was -- from what I remember
11 or recall, it was split into three lots. And so I -- I
12 allocated some water use, about another 8- to 10,000
13 gallons a month for -- for Lot No. 2 or at least what
14 was shown to be Lot 2. And then Lot 3, which was a
15 smaller lot was another 2- to 4,000 gallons a month.

16 So based on that, I believe I wrote a
17 letter to Mack Reynolds and we talked in terms of
18 overall uses of somewhere around 350,000 gallons a month
19 was an estimated usage, which is what I believe Polonia
20 was asking for, was some type of estimated water usage
21 or water demand.

22 And I think in that same letter that I
23 sent to Mack, you know, I -- I said this could be done
24 with a 2-inch meter. So we were trying to give Polonia
25 some idea of some -- at least preliminary ballpark

1 estimated usage.

2 Q And do you know if that letter that you wrote
3 to Mr. Reynolds has been included in any portion of this
4 application or produced to us?

5 A I don't know.

6 Q And do you know if you have sent any
7 correspondence to Polonia asking for 350,000 gallons per
8 month of water?

9 A I did not -- I did not send anything -- I
10 personally did not send anything to Polonia. But it was
11 my understanding from Mack Reynolds that Polonia was
12 requesting from him this estimated amount of water. And
13 subsequent to my submitting this to Mack Reynolds, we
14 received a letter, or Mack received a letter, dated
15 October 24th stating that the Environmental Park
16 development, number one, is within Polonia's supply
17 of -- water supply's CCN, which is a Certificate of
18 Convenience and Necessity, and that they will serve the
19 development when all of the conditions of the tariffs
20 are met.

21 So it appears that based on this letter
22 from Paul Pittman with Polonia, it appears that he was
23 responding to Mack's submission.

24 Q And do you have a copy of that October 24th,
25 2014 letter that you're looking at?

1 A I do.

2 Q Okay. And I think that's been identified as
3 130EP's Exhibit 48. Do you know about that?

4 A No.

5 Q Okay. If you don't, I'm just going to read --
6 the copy that I have is just one sentence. I'm going to
7 read it, and I just want to make sure we're talking
8 about the same letter. Okay?

9 A Okay.

10 Q It says, "Dear Mr. Reynolds, the 130
11 Environmental Park development is in the Polonia Water
12 Supply Corporation CCN, and Polonia will service the
13 development when all conditions of the tariff have been
14 met." Is that correct?

15 A That -- that is correct.

16 Q Okay.

17 A That is -- appears to be the one sentence
18 letter.

19 Q But in this letter, it doesn't contain anything
20 about the amount of water that will be available to 130
21 Environmental Park. Correct?

22 A That's correct.

23 Q Okay. The other question that I had dealt with
24 the access roads and the documentation submitted to
25 Caldwell County. I think Ms. Perales asked you a number

1 of questions related to that. Do you recall those
2 questions earlier?

3 A I do.

4 Q And then specifically Ms. Perales mentioned --
5 or showed you Protestants' Exhibit 22, 23, and 24, which
6 were notices of deficiencies, and there were various
7 questions in each -- there was a question in each one of
8 those exhibits discussing the access road. Do you
9 recall that?

10 A I do.

11 Q And the response on each one of those letters
12 provided that you had begun the preliminary platting
13 process with Caldwell County and will obtain all local
14 permits and authorizations required of the project. I
15 just want to make clear that you understand a
16 preliminary plat is about subdividing property.
17 Correct?

18 A Yes.

19 Q And that's what you referred to earlier as
20 Lots 1, 2, and 3?

21 A The -- yes.

22 Q Okay.

23 A That -- yes.

24 Q Okay. So you agree with me that a preliminary
25 plat doesn't have anything to do with a floodplain

1 permit?

2 A I'm not sure I can respond to that. I would
3 probably rely on Tyson Traw to address that --

4 Q Okay.

5 A -- seeing that he submitted and worked on the
6 preliminary plat and also the drainage.

7 Q Okay. So what I understood your testimony or
8 response that you gave to Ms. Perales' question was,
9 that your understanding is that the preliminary plat had
10 been approved and that you didn't know if a flood -- a
11 floodplain permit had been approved yet. Is that
12 correct?

13 A Yeah. My answer to her was, is that my
14 understanding from Mr. Traw was that -- that a
15 preliminary plat had been approved, but I was not aware
16 of a floodplain development plan being approved.

17 Q Okay. Do you know if a floodplain development
18 permit has even been applied for with Caldwell County?

19 A I don't know.

20 MR. MAGEE: No further questions.

21 JUDGE QUALTROUGH: All right. I think
22 that's everybody's cross. Any redirect?

23 MR. RYAN: No, Your Honor.

24 JUDGE QUALTROUGH: All right. Thank you,
25 Mr. Maroney.

1 THE WITNESS: All right. I appreciate it
2 very much. Thanks.

3 JUDGE QUALTROUGH: All right. You can
4 hang up now.

5 All right. Let's take a break, and then
6 we'll come back with Mr. Traw.

7 MR. RYAN: Okay.

8 (Recess: 2:49 p.m. to 3:05 p.m.)

9 (Exhibit Applicant Nos. 51 through 55
10 marked)

11 JUDGE BELL: All right. We are back on
12 the record continuing with cross-examination of Mr. Traw
13 by Caldwell County.

14 MR. MAGEE: Thank you.

15 REBUTTAL PRESENTATION ON BEHALF OF APPLICANT (CONTINUED)

16 TYSON TRAW,

17 having been first duly sworn, testified as follows:

18 CROSS-EXAMINATION (CONT'D)

19 BY MR. MAGEE:

20 Q Mr. Traw, I think you left off on Manning's
21 roughness coefficient. Right?

22 A That's my recollection.

23 Q And actually what I've done is talked about
24 some of the questions that were raised by OPIC,
25 Mr. Tucker, and by the Executive Director.

1 I want to go back now to some of the
2 questions that you were asked on direct by Mr. Ryan.
3 Okay?

4 The first thing is, Mr. Ryan asked you to
5 look at Exhibit 25, 130 Exhibit 25, which was a map.

6 A Okay.

7 Q Okay. And down in the bottom of 130, you said
8 (as read), "The issues for permitting purposes only."
9 And the first revision of January 2015 said, "Revised to
10 include the CAPCOG LIDAR data." Right?

11 A Yes.

12 Q It's my understanding, I think I heard you say
13 from your question with Mr. Ryan is that if you would
14 have had that CAPCOG LIDAR data, you would have included
15 that in the permit?

16 A Yes.

17 Q Okay. And then you would agree with me it's
18 not in there now?

19 A Yes.

20 Q And then Revision No. 2, February of 2015, is
21 this revised hydraulic and hydrology models that we
22 discussed here the other day or other days, that we both
23 agree that that information is not in there. Correct?

24 A Not in the application?

25 Q Correct.

1 A Right. That is -- well, specifically the
2 hydrology part of that is talking about the changes to
3 shallow -- well, shallow concentrated flow rates and
4 Manning's roughness.

5 Q I think we've been over the Manning's roughness
6 enough --

7 A Okay.

8 Q -- to know what those changes were and what's
9 in the application and what's in the information
10 submitted to Caldwell County.

11 And then No. 3 is the one you just did
12 right before this hearing on August the 12th of 2016
13 which you included in the landfill footprint. I think I
14 asked you some questions about that last week. This
15 map, though -- and there's not a map that you
16 produced -- that also includes the other structures
17 associated with the landfill, whether they be buildings
18 or -- I think you used drainage control systems or
19 structures that are included on a map like this with a
20 floodplain. Correct?

21 A Can you ask that again?

22 Q Sure.

23 I think we had the same conversation the
24 other day. But the only change you made here was the
25 landfill footprint that you added --

1 A Yes. I just added the landfill footprint to
2 the exact same floodplain work map that was submitted to
3 the county right before they approved it.

4 Q And there's no map that you know submitted to
5 the county that also includes the various buildings,
6 other structures, associated with the landfill
7 footprint?

8 A Well, I think maybe early on we -- we submitted
9 one that was just straight out of the application, and I
10 talked about that earlier, how that wasn't really
11 sufficient for the plat because it doesn't include the
12 whole property.

13 Really, the point that we were trying to
14 accomplish with the plat was to identify the floodplain
15 in its existing condition on the Hunter Tract, that way,
16 the -- once you move on from there, everybody knows
17 where a baseline is.

18 Q And so -- I appreciate you clarifying that.
19 There may have been one early on, but in a final format
20 that includes all of the changes in the hydraulic and
21 hydrology models, that's not included in here. Correct?

22 A That's correct. Yeah.

23 Q Okay. I'm going to move on now. I think
24 Mr. Ryan asked you about the access roads and that you
25 designed the culverts?

1 A Yes, I did.

2 Q Okay. Do you know if you have applied for a
3 floodplain permit with Caldwell County for crossing
4 those floodplains?

5 A I have not.

6 Q Okay. At the very beginning of your testimony,
7 Mr. Ryan asked you a question about your evaluation of
8 the 100-year, 10-day storm event and the 24-year, 10-day
9 storm event, and you gave a description as to the models
10 that you used when you were doing the work on the
11 application. Do you recall that?

12 A No.

13 Q Okay. What models did you use -- what storm
14 event did you use when preparing this whole notebook,
15 Part C?

16 A Two different ones -- well, more than that.

17 Q Okay.

18 A Let me just try to explain it for you.

19 So in the -- in the -- on Page 52 of
20 130EP-2, that part is talking about the drainage
21 analysis and design.

22 Q Okay.

23 A So within that section, that's where we are
24 trying to demonstrate that there are no adverse
25 alterations to drainage patterns. For that analysis, we

1 used the 25-year, 24-hour. That's what is required by
2 the rules.

3 Q Okay.

4 A We also analyzed the 100-year, 24-hour. Now,
5 later on in the process, Mr. Odil asked us to evaluate
6 the floodplain. We heard testimony about that. And so
7 we went back and did that instead of just relying upon
8 the FEMA floodplain.

9 Q Right. I think he testified that he asked you
10 to model the floodplain.

11 A Correct.

12 Q Correct? Rather than rely on the FEMA
13 floodplain?

14 A Right.

15 Q Okay.

16 A So that part begins in Attachment C2?

17 Q Okay.

18 A That starts on Page 244. So we want to look at
19 the 100-year storm there, right, because it's a 100-year
20 floodplain. But it's important that we look at the
21 10-day event because that's what results in the highest
22 flood pool elevation of the reservoir. So if I were to
23 only look at the 100-year, 24-hour, then I would have
24 been including the floodplain that would have been less
25 extensive than it would have otherwise. Does that

1 answer your question?

2 Q I think so. I just wanted to make sure I
3 understood what you testified to earlier between
4 yourself and Mr. Ryan.

5 I think Mr. Ryan asked you some questions
6 about Page 94 -- 130EP-2, Page 94 -- or it may have been
7 the -- no. It was on Page 79. I'm sorry. We were
8 talking about the peak discharge, the volume, and the
9 velocity. Do you recall that?

10 A Yes.

11 Q And then I think there was a question that
12 said, "Did you believe Mr. Bratton's approach was
13 conservative?" Do you recall that question?

14 A Yes, I do.

15 Q And your answer was no. Explain for me why it
16 wasn't conservative.

17 A Okay. So again, I -- again, some of my
18 testimony earlier talking about how Manning's roughness
19 is a way to characterize the channel friction. And we
20 use that many different places. Okay? So -- and I was
21 referring specifically as far as it being conservative
22 in regards to the floodplain delineation. So that's not
23 included here on Page 79.

24 Q Okay.

25 A But for the floodplain delineation, it's not

1 necessarily conservative because you have two parts to
2 the lineated floodplain. You've got to determine the
3 hydrology, so that's the flow rate. And in this case,
4 our downstream boundary condition, which is the flood
5 pool of the Site 21 Reservoir. That becomes very
6 important. So we determined that. And using
7 Mr. Bratton's assumptions, that increases the peak
8 discharge by -- by lowering those roughness
9 coefficients. Now, if I use the same assumption that
10 established that roughness in the hydrology part, and I
11 apply that to my hydraulic model, that means that my
12 channel in my hydraulic model is slicker. It has less
13 friction. So I apply this flow rate that's higher now,
14 but I have less friction in my channel. So then my
15 floodplain is less extensive. Now, really, what happens
16 in this case is those pretty well offset. That's why
17 there's insignificant changes between the floodplain
18 shown in the application and the one on the preliminary
19 plat.

20 Q And all of this is actually to just get your
21 starting off numbers, right, where you start off with,
22 what the existing conditions are at the site. Correct?

23 A Which analysis are we talking about?

24 Q The one you just gave the example for.

25 A That's an overall general concept.

1 Q So you're plugging in the Manning's roughness
2 coefficient. Right? And that's a parameter that you
3 plug into these models to kind of get your starting off
4 point number. Right?

5 A No. I wouldn't say that's right at all.

6 Q Okay. You're trying to gauge what -- you use
7 the word smooth. Right? And you describe the channel
8 as what, because that's what you're determining where
9 you come up with the Manning's roughness coefficient.
10 Right?

11 A Right. So you -- what I do is -- when it's
12 possible, I try to visit the site in the specific
13 channel location that I'm trying to determine the
14 Manning's roughness for. And I go and view that, and I
15 go into the -- compare what I see visually in terms of
16 whether it's weeds or deep pools of ineffective area or
17 undergrowth, things of that nature. Then I go into that
18 table, and I determine, okay, well, in this area, my
19 roughness is whatever it is.

20 Q Uh-huh.

21 A And then generally, you apply that both to
22 hydrology and the hydraulics. So it's -- and it's two
23 separate models.

24 Q Right. So by giving a lower number, right, the
25 .045, you're increasing the peak flow. Right?

1 A That's correct.

2 Q Okay.

3 A That's in the hydrology part.

4 Q So all of the off-site perimeters that flow on
5 to all these drainage areas that you've designed off
6 site that flow as part of this analysis to determine
7 what the floodplain is and how the drainage goes, the
8 peak flow, the volume and velocity, right, you don't
9 know what any of those channels look like. You told me
10 you didn't trespass to go on their properties to come up
11 with their number. Right?

12 A Correct.

13 Q But we looked at that, and you gave those a
14 .065?

15 A I -- I don't recall what part --

16 Q All of them --

17 A The section we were talking about was -- that
18 you were referring to me earlier was solely about
19 routing. It really has very little effect on any of the
20 outcome in this case. But --

21 Q But you --

22 A I'll try to clear it up.

23 Q Hold on just a second. You would agree with me
24 you don't know what development off site is going to
25 occur at any of these channels to know whether it's a

1 .065 or a .045. Right?

2 A That's correct.

3 Q So if you took a more conservative approach and
4 increased the peak discharge now by doing a .045, you
5 would be taking into consideration any development
6 because you don't even know what these channels look
7 like off site and you would be increasing that peak
8 discharge, therefore that would be a more conservative
9 approach if you used the word "conservative" because
10 you're already starting out with a higher peak
11 discharge. Would you agree with that?

12 A No.

13 Q Okay. And so I'm going to move on from that
14 because you don't agree with me that that's more
15 conservative.

16 I think earlier you testified that you
17 used shallow concentrated -- concentrated flow where you
18 didn't have enough data for channel flow. Is that what
19 I understood you to testify?

20 A Not precisely.

21 Q Okay. I think that's where I was going to ask
22 you to turn to Page 94.

23 A (Witness complies).

24 Q Okay. This is, I think, the one where we talk
25 about sheet flow in the far left-hand grouping, the

1 middle one talks about shallow concentrated flow, and
2 then the last section talks about channel flow.

3 Correct?

4 A Yes.

5 Q And that's where we were talking about these
6 water course links --

7 A Correct.

8 Q -- the other day and today. So what did I have
9 wrong about your earlier testimony where I wrote down
10 you used shallow concentrated flows where you did not
11 have enough data for channel flow? Tell me what your
12 testimony was.

13 A It's not necessarily enough data.

14 Q Okay.

15 A It goes back to the ability to make assumptions
16 about the channel geometry from the topographic data
17 because that's what we're using.

18 Q Okay.

19 A So in places where I could determine that --
20 that a channel existed, and I could determine what its
21 geometry was and assume a reasonable depth associated
22 with that geometry, then I could use the channel flow
23 assumption.

24 Q And so what data are you looking for to start
25 making those determinations? You're talking about

1 topographical maps, right, topo data?

2 A Correct.

3 Q What other data are you looking for?

4 A It's primarily all topographic data.

5 Q Okay. And are there any guidelines? I think
6 Mr. Ryan asked you some questions about the TR-55, the
7 TCEQ rules in TAC, and the engineering handbook. Are
8 those -- are those the guidelines you're looking for
9 when you're trying to determine what data is available
10 for you to make these determinations?

11 A No.

12 Q No? What data are you looking for?

13 A I'm looking for the topographic data.

14 Q So if you would look at Protestants' Exhibit --
15 it's a black binder. I think it's Volume 3.

16 A I think I have it right here.

17 Q It's Exhibit 9C.

18 A Okay.

19 Q Are you with me? So this is the TR-55 that
20 we've heard testimony about in this case so far, and
21 it's already been admitted. Specifically, I was going
22 to ask you to look at Protestants' Exhibit 9C, Page 31.
23 And the definition for -- or the description for open
24 channels there. Would you read that for us?

25 A Sure. Open channels are assumed to begin where

1 surveyed cross-section information has been obtained,
2 where channels are visible on aerial photographs or
3 where blue lines indicating streams appear on United
4 States geological survey quadrangle sheets.

5 Q Okay. So have there been any survey
6 cross-section information that you have obtained?

7 A No.

8 Q Okay. And where it's visible on aerial
9 photographs, that's what you're referring to as the
10 topographical maps?

11 A No, not necessarily.

12 Q Okay.

13 A I would say a topographical map is very
14 different from an aerial photograph.

15 Q Okay. And where blue lines indicating streams
16 appear or where blue lines indicating streams appear on
17 a United States Geological Survey, the USGS quadrangle
18 sheets. Correct?

19 A Uh-huh.

20 Q Did you do any of those?

21 A We use their contours. I'm not sure that I
22 used them in my drainage analysis.

23 Q Okay. But according to TR-55, that's a method
24 in which you can obtain -- it's a location of where you
25 can go into channel flow. Correct?

1 A That's what they're suggesting here.

2 Q Okay. Would you turn to 130EP-1, Page 118?

3 A EP-1?

4 Q Yes.

5 A Oh, okay. Sorry.

6 Q It's in Volume 1.

7 A Okay.

8 Q And I was referring to Page 118.

9 A Okay.

10 Q The description of it is a general topographic
11 map. Correct?

12 A Yes.

13 Q And if you look over in the note, it gives a
14 description as it being the topographic base map is U.S.
15 Topo 2013 of 7.5-minute quadrangle Lockhart, North Texas
16 and Dale, Texas downloaded from USGS website on June 10,
17 2013. Imagery date is May 2010. Did I read that
18 correct?

19 A I think so.

20 Q And then there's blue lines all throughout this
21 document under legend that says, "Surface water body or
22 other water." Correct?

23 A That's what the legend says, yes.

24 Q Okay. And so would you agree with me this is
25 the same map that's being referred to in TR-55?

1 A Yes. This -- the basis for this map is a USGS
2 quadrangle that they're referencing in TR-55.

3 Q And so one of the ways to start your analysis
4 from where you change from shallow concentrated flow to
5 channel flow is -- according to TR-55, is you could look
6 at these blue lines to know where channels begin.

7 Correct?

8 A Well, I don't know that the USGS determines
9 that's where channels begin. They're really calling it
10 an intermittent stream. But, yeah, if you relate that
11 to TR-55, then they're suggesting that that method may
12 apply where a blue line is.

13 Q Okay. Mr. Ryan asked you some questions
14 related to the information that was in the application,
15 and I believe your testimony was that the information in
16 the application is accurate and appropriate. Correct?

17 A I don't recall that.

18 Q I wrote down those were the words that were
19 used, were accurate and appropriate. Do you think the
20 information in the application is accurate and
21 appropriate?

22 A Well, I'm certainly not here to testify to the
23 entire application. There are many parts to that --

24 Q Your part of the application, Part C?

25 A Okay. As far as I know, Part C is accurate,

1 yes.

2 Q Okay. And you used -- and you wouldn't make
3 any changes based on the information you submitted in
4 the preliminary plat to the hydraulic and hydrology
5 models. Correct?

6 A No, that's not what I said.

7 Q Okay.

8 A I said if I were to do this again today, that I
9 would likely include the LIDAR data.

10 Q Okay.

11 A Now, my assumptions for Manning's roughness, I
12 still believe were accurate and more correct.

13 Q Okay. You're a professional engineer. Right?

14 A Yes, sir.

15 Q And you hold a master's. Right?

16 A Yes, sir.

17 Q So you're sealing and certifying documents that
18 you submit not only to the TCEQ but also to Caldwell
19 County. Correct?

20 A I did.

21 Q Okay. So why would you submit one group of
22 documents to TCEQ to get approval. Right? If it's
23 accurate and appropriate, why would you even remotely
24 make a change to any document you're submitting to
25 Caldwell County?

1 A Well, primarily because Mr. Bratton requested
2 that I make those changes.

3 Q So as a --

4 A I would have been able to get the -- the
5 preliminary plat approved had I not acquiesced to his
6 request.

7 Q So you're willing to say anything to get
8 anything approved?

9 A I wouldn't go that far.

10 Q Well, I mean, if you're a professional and your
11 reputation is on the line and you have defined something
12 as being accurate and more correct, why would you risk
13 that reputation to then change something to something
14 that now you don't believe is accurate and less correct?

15 A Can you repeat the question?

16 Q Yes. Is the only reason you're changing it is
17 just to get a plat?

18 A No. So it's fairly common that, as an
19 engineer, we submit things to reviewing bodies all the
20 time, whether it be the TCEQ, or a county reviewer,
21 whoever else. It often occurs that whoever that
22 reviewer is, is either familiar with a certain method or
23 familiar with a certain assumption that is not
24 necessarily wholly unreasonable. And a lot of times it
25 doesn't change the end product. If you use what that

1 reviewer has requested, then things move forward, and
2 you move on. There's really no difference in the
3 outcome of the product. So it's not to say that I
4 provided a floodplain delineation that's any more or
5 less correct in either of those.

6 Q Okay.

7 A It's just how we got to the end point.

8 Q Well, I guess, then, I got confused because
9 earlier you testified you submitted the exact same
10 document to TCEQ and to Caldwell County. And then you
11 went on to make it a point to say that the information
12 you submitted to the TCEQ, you really wouldn't make any
13 changes, especially to the Manning's roughness
14 coefficient because it was more accurate and
15 appropriate. Now, you've said more correct. And then
16 you told me otherwise if you wouldn't have made the
17 changes, that you wouldn't have got your preliminary
18 plat. So that tells me you're willing to submit one set
19 of documents to TCEQ and another set of documents to get
20 your way with Caldwell County. And you're willing to
21 change any of those numbers or the parameters of those
22 numbers to ensure that you get either one. That's the
23 way I'm hearing your testimony. Do you agree with that?
24 A Well, I mean, you said that's the way you hear
25 it. I don't agree with your statement of it, no.

1 MR. MAGEE: Okay. I don't have any
2 further questions.

3 JUDGE QUALTROUGH: All right. Redirect?

4 MR. ALLMON: Your Honor?

5 JUDGE QUALTROUGH: Did I forget you -- I
6 thought you already had. I apologize.

7 CROSS-EXAMINATION

8 BY MR. ALLMON:

9 Q Good afternoon, Mr. Traw.

10 A Good afternoon.

11 Q Do you still have Protestants' Exhibit 9C in
12 front of you? That's the TR-55 document.

13 A Okay.

14 Q And could you stay with me on Page 31 of that
15 where it says "Open Channels"?

16 A Yes, sir.

17 Q And we've discussed this -- you discussed this
18 sentence with Mr. Magee. It says, "Open channels are
19 assumed to begin where blue lines appear on the United
20 States Geologic Survey quadrangle sheets." Is that
21 accurate?

22 A That's what it says.

23 Q Okay. So they don't merely suggest that they
24 begin there. They say they are assumed to begin at that
25 point. Correct?

1 A That's what it says.

2 Q In doing your calculations, did you assume that
3 open channels began where blue lines appear on the
4 topographic map?

5 A In some places I know that I did. I don't know
6 if it was in all places or not. I -- I couldn't be
7 sure.

8 Q Are there some places where blue lines are on
9 the USGS maps that you did not treat as open channel
10 flow?

11 A I'm not sure.

12 Q So you don't know whether your analysis is
13 consistent with that assumption?

14 A Well, my understanding of that paragraph there
15 is it's really getting to the idea of where you can
16 actually assume a geometry. That's why, like, for
17 example, they lead off with surveyed cross-section.
18 That's what that's for. So if we establish a
19 cross-section at one of these locations, then you're
20 going to treat it as a channel flow.

21 If you had a surveyed cross-section, it
22 might even be -- I don't know -- I mean, a very small
23 ditch. But if you have survey points for that, that's
24 the more appropriate and accurate way to do it. In this
25 case, we had the USGS contour map, which is a 10-foot

1 contour interval. And there were many places, in my
2 opinion, that I could not estimate the channel geometry
3 in a way accurate enough that would -- that would lead
4 me to a more correct estimation of the time of
5 concentration than the already assumed geometry built in
6 the shallow concentrated flow for the Manning's
7 equation.

8 Q And those USGS topographic maps you had
9 available also told you where there were blue lines. Is
10 that correct?

11 A They were available. We didn't have them on
12 that map. We just used the contours.

13 Q So that was information that this says based
14 upon which one would assume on open channel flow, where
15 you find those blue lines on the USGS maps?

16 A That's what it says.

17 Q And did you at all times assume that to be open
18 channel flow where there were blue lines on a USGS maps?

19 A Again, I can't be sure of that because we
20 didn't have that on the map, so I'm not really sure.

21 Q So you don't know whether your analysis
22 conformed with the assumptions set forth here?

23 A Well, I'm not sure that it conforms with
24 starting channel flow where a blue line is indicated on
25 a map.

1 Q So insofar as this analysis asked when to
2 assume that open channel flow begins where there's blue
3 lines, you don't know whether your analysis conforms
4 with that?

5 A That's correct.

6 Q And you had some discussions with Mr. Ryan
7 about unit hydrographs. Do you recall that?

8 A I do.

9 Q And I think you looked at Page 85 in Exhibit
10 ED-2. We may not need to turn there. Let me go ahead
11 and ask you a question.

12 And does that indicate that you used the
13 methods set forth in TR-55?

14 A Well, Tracy Bratton pointed this out the other
15 day. But the method in TR-55 identifies the hydrograph,
16 and it was established in 1986 before our ability to do
17 all this with computers. So we actually used the
18 HEC-HMS model that uses the hydrograph that's described
19 in TR-55. But you don't go through the same tabular
20 method described in TR-55.

21 Q Does TR-55 have only one unit hydrograph?

22 A Yes, sir, it does.

23 Q So only one set of data for one particular
24 storm is set forth in all of TR-55?

25 A No. That would be incorrect.

1 Q Is it not true that there's data -- well, what
2 types of things do you need to know in order to choose
3 which unit hydrograph to use?

4 A Well, if you use the SCS method and the SCS
5 unit hydrograph, once you determine that that's what
6 you're going to use, that's it. There are no other
7 peaking factors or any other assumptions necessary.

8 Q All right. Is there certain types of
9 appropriate NRCS rainfall distributions? Is that one
10 factor used to select the hydrograph?

11 A Yes.

12 Q At any point in the application do you state
13 what the appropriate NRCS rainfall distribution is in
14 this location?

15 A Let me back up. I answered your first question
16 before you finished. So -- and I -- I want to make a
17 distinction here that the -- the rainfall distribution
18 does not affect the hydrograph. And I think your
19 question related those two. So there is specific
20 rainfall distribution that's listed in TR-55 that we
21 follow. There are, I believe, four different storms.
22 We used the one for the area of the site.

23 Q Is there anywhere in the application that you
24 identified which of those NRCS rainfall distributions
25 you used?

1 A I'm not sure. Certainly it would be in the
2 model that was included with the application, but we may
3 talk about it in the narrative as well, or the rainfall.
4 I just don't remember. Would you like me to try to find
5 that.

6 Q If you could, take a minute and see if you
7 could do that.

8 A Okay. I found it. EP -- this is one place.
9 130EP-2, Page 121, it talks about hypothetical
10 precipitation about halfway down the page. It says,
11 "The rainfall distribution is the SCS 24-hour, Type 3
12 storm."

13 Q And why did you select Type 3?

14 A Because that's the one that TR-55 says to use.

15 Q Is this in an area where there's a -- near the
16 boundary between Type 3 and another type?

17 A No.

18 Q Turn with me, if you would, to Page 95 of
19 130EP-2. This is where we've got different -- we've got
20 Manning's roughnesses listed for the various reaches in
21 the area. Correct?

22 A Yes. These are reaches associated with the
23 hydrology model.

24 Q And if I understood your testimony in response
25 to Mr. Ryan's questions, are your site visits the

1 primary basis for the Manning's roughness that you
2 selected?

3 A It depends on the location we're talking about.
4 In -- in this specific instance on Page 95, again, that
5 is an average for that entire reach. You can only input
6 that for the entire reach. So it's not as specific as I
7 would have been, like, in other places of the
8 application.

9 Q So in the application where you chose Manning's
10 roughness, is it generally that that was based on the
11 information gleaned from your site visits?

12 A And aerial photos.

13 Q Aerial photos.

14 Now, did you take any notes during your
15 site visits?

16 A No, sir.

17 Q Did you take any photographs during your site
18 visits?

19 A I don't recall any -- any photographs.

20 Q Did you record any measurements during your
21 site visits?

22 A As related to roughness?

23 Q Yeah. As related to the geometry of the
24 strains.

25 A Well, no, that would be a survey cross-section,

1 and I didn't conduct any surveys.

2 Q So once you returned to the office, did you sit
3 down and document how your observations related to your
4 assumptions on Manning's roughness?

5 A Well, when I returned to the office, I would --
6 I would go right into the -- or I would have probably
7 already done some modeling and entered in maybe a
8 preliminary number from an aerial photograph, for
9 example. And then after my site visit when I would have
10 been more informed, I would have went back and said,
11 well, this area right here really should be whatever
12 that roughness is.

13 Q And did you at any point document how the
14 selection of that number related to the observations
15 made at your site visit?

16 A We talked about that before. Really, you just
17 look in the chart and try to figure out what description
18 in that table fits how you would describe the stream at
19 that location.

20 Q Did you document that thought process in any
21 way?

22 A I'm not sure there's really all that much of a
23 thought process. I mean, I don't -- going to the site
24 visits, that would have been one of the first things --
25 that was the first time that Mr. Maroney and I visited

1 the site. And we started talking, "Well, what do you
2 think the roughness is right here?" But I don't have
3 a -- I didn't record that, and I didn't take any notes
4 of that.

5 Q Okay. Now, as we look at these, could you turn
6 with me in EP-1, Page 62, keeping this table in front of
7 you as well. EP-1, Page 62.

8 A Okay.

9 Q Okay. Does Page 62 provide an aerial
10 photograph of the site?

11 A It does.

12 Q And where would -- as described on Page 95,
13 where would the reach -- where would Reach Dry Creek be
14 located if we look at this aerial photograph on 62?

15 A Well, without going back and referring to the
16 schematic and the watershed basis, generally, it's going
17 to be upstream of the dam between the dam and -- and
18 roughly Hommannville Trail along Dry Creek.

19 Q So is that kind of -- as we look at Page 62,
20 the stretch kind of to the right of the northwest of the
21 dam?

22 A As it relates to Dry Creek on Page 95?

23 Q On Page 95, yes.

24 A Generally.

25 Q And what on this -- what in your observations

1 of the site and on this -- on the aerial photograph --
2 on the aerial photograph led you to conclude the
3 Manning's roughness there would be 0.065?

4 A I'm not sure that I can tell much from this
5 aerial photograph of this scale. I wouldn't use it. I
6 would use something where I could zoom in on a computer
7 to make that determination. I can't see enough here to
8 make a determination.

9 Q When you use the aerial photograph that you
10 used and thought back to your site visit, what was it
11 about your observations of the aerial photograph and
12 your site visit that led you to select a Manning's
13 roughness of 0.065 in Dry Creek?

14 A In the specific case of Page 95?

15 Q Yeah. The one you chose there, 0.065.

16 A Okay. So again, I'm trying to make an average
17 of that entire reach because I only have one place where
18 I can apply that, strictly related to the kinematic wave
19 perimeters. So I'm just trying to get a general average
20 approximation there.

21 If you want to look at like what I really
22 thought the roughness was, we can look in C2 in the
23 actual channel geometry of the hydraulics of that
24 channel, and then we can go step by step and we can see
25 what those are.

1 Q Well, I mean, you use the term 0.065 here on
2 EP-2, Page 95, and I'm just trying to understand what it
3 is about that stretch that led you to conclude the
4 Manning's roughness of 0.065?

5 A And I guess I'm telling you I can't point to
6 necessarily one thing because lumped into this entire
7 reach is a lot of different locations. So I'm trying to
8 get an average for -- strictly for this portion, the
9 kinematic wave routing perimeters.

10 Q As shown on this aerial photograph, is there a
11 lot of cover over that reach?

12 A It depends on where you're talking about. From
13 what I can tell here, along the creek, it looks like
14 there is a substantial amount of trees. I don't know
15 how close those are to the actual banks of the creek
16 from this photo. But there would be a potential for,
17 you know, certainly something higher than, say, like a
18 .035 or even a .045 here.

19 Q And where would, say, Reach 2 be located as we
20 look at this aerial photograph?

21 A I'm going to have to go back and refer to each
22 one of those things to determine that. I just don't
23 recall off the top of my head.

24 Q Yeah. For the moment, let's just figure out
25 Reach 2.

1 A Okay. I know where it is. I'm just trying to
2 figure out how to describe it to you.

3 Q Okay.

4 A You see the northernmost northwest corner of
5 the Hunter Tract?

6 Q Yes, including the permit boundary?

7 A I'm just talking without the tract.

8 Q So you're talking about the tract that's
9 outside of the permit boundary?

10 A I'm talking about the northernmost northwest
11 corner of the Hunter Tract.

12 Q Yeah.

13 A Okay. And then if you move to the west,
14 there's another exterior corner. That's generally the
15 location that that reach would be.

16 Q And how would you describe the cover that's
17 depicted on this aerial photograph for that reach?

18 A Well, again, I can -- it would be very
19 difficult from this photo to tell anything.

20 Q Is it identical for the cover shown for the Dry
21 Creek area?

22 A No, it's not, at least around the channels.

23 Q And yet you concluded an identical Manning's
24 roughness for every reach within the property. Is that
25 accurate?

1 A No.

2 Q Well, I'm looking at Page 95, and is the
3 Manning's roughness there -- I'll give you a second to
4 find it.

5 A If you want to limit your question to Page 95,
6 then that's accurate.

7 Q Yes.

8 A Okay.

9 Q And this was what you used for -- which
10 specific analysis was it that you used these for?

11 A This is a factor in the hydrology analysis, the
12 kinematic wave routing perimeters, and what that means
13 is where you have a -- a hydrograph determined from
14 runoff from a -- a sub basin. So you determine that
15 runoff, and you have a hydrograph. That hydrograph gets
16 translated downstream to some other location. And then
17 it joins up with other basins and that kind of thing.
18 And as that hydrograph moves downstream, there's some
19 attenuation and a -- a difference in time as to, for
20 example, like, when the peak might arrive. Do you want
21 me to draw you a picture?

22 Q No. I guess my question is --

23 A Okay. It's difficult to explain.

24 Q We have 12 different reaches listed here on
25 Page 95. Correct?

1 A That's correct.

2 Q And each of those is a reach -- are certain of
3 those reaches here within the property boundary?

4 A Yes.

5 Q Are any of those reaches outside the property
6 boundary?

7 A Yes. I believe some of them are.

8 Q And do these 12 reaches encompass all of the
9 reaches that you use for that hydrologic analysis?

10 A I think so. I'm not sure there's 12. I'd have
11 to count them.

12 Q Well, let's count them real quick.

13 A Okay. Yes. There's 12.

14 Q Okay. And so these are all of the reaches you
15 used for that analysis?

16 A Yes.

17 Q And based -- and for this step, at least, you
18 assumed an identical Manning's roughness for every reach
19 within the site on properties surrounding the site?

20 A That's correct.

21 Q Are these streams all identical in their
22 roughness?

23 A Likely, no. What I'm trying to do here is
24 capture the average of that entire reach.

25 You know, this one reach, for example, is

1 2500 feet or 2496. So I've got to determine what
2 generally is the average roughness over that entire
3 length.

4 Q And so are each of these numbers based on site
5 specific observations during your site visits?

6 A These numbers are an average or a
7 representation of -- of the site visits where I have
8 incremental assumptions of roughness as you move along
9 the stream. Like I said, I can show you those in C2 if
10 you're interested.

11 Q Well, I'm just trying to -- based on those
12 various visits you found that as you average it over
13 each of those reaches, it's uniform in Manning's
14 roughness across the site and areas around the site?

15 A I'd say that generally -- the streams as it
16 relates to the kinematic wave routing perimeters, .065
17 is a reasonable number.

18 Q Uniformly --

19 A Yes.

20 Q -- for all these reaches? Okay. Now,
21 discussing the adverse impacts to drainage patterns, I
22 know you repeatedly referenced the 25-year, 24-hour
23 storm event. Do you have a copy of the rules up there?

24 A I do.

25 Q Could you turn with me to 330.63?

1 A I recall that's a pretty big section, so I'm
2 going to need more --

3 Q I'll get us to a more specific spot.

4 A Okay.

5 Q I'm going to 330.63, Paragraph c1C.

6 A So that's little C?

7 Q Yeah. Little C and then one and then capital
8 C.

9 A Okay.

10 Q And does that require that an Applicant provide
11 sample calculations -- well, does that require sample
12 calculations provided to verify that existing drainage
13 pattern will not be adversely altered?

14 A Yes.

15 Q Is that rule limited in any way to the 25-year,
16 24-hour storm event?

17 A No, I don't think so.

18 Q So if drainage patterns were adversely altered
19 during a different event, would that constitute
20 something that should be considered?

21 A Well, I think it's pretty specific in other
22 locations where it talks about the 25-year in the
23 adverse alteration of drainage patterns.

24 Q But in this location, is it limited in that
25 way?

1 A It doesn't specifically say that it is.

2 Q So if there were -- if drainage patterns were
3 adversely altered during the probable maximum flood
4 event, would that still qualify as the adverse
5 alteration of drainage patterns?

6 A If this area were to see the probable maximum
7 flood event, then, I don't believe there's going to be
8 anybody concerned about how the landfill might affect
9 whether their home is going to be flooded or anything
10 else.

11 The probable maximum flood is only used
12 for reservoirs as far as I know of, to -- to make sure
13 that they -- they don't -- to try to prevent breaches.
14 And it is a very extreme event that I think would be
15 absurd to talk about how the landfill might impact
16 drainage patterns in a probable maximum flow.

17 Q Well, of course, we have a landfill here
18 located very approximate to a reservoir. Is that
19 correct?

20 A That's correct.

21 Q And, of course, we're quite concerned here,
22 making sure that reservoir is not breached. Correct?

23 A Well, currently if you have a probable maximum
24 flood, even today without the landfill, I would say that
25 the dam is going to fail.

1 Q Okay. And now did you do any analysis to
2 determine whether under a probable maximum flood, what
3 impact the landfill would have on the runoff?

4 A I did not consider the probable maximum flood
5 in my drainage analysis.

6 Q Did you do any analysis to see how this
7 landfill impacted the likelihood of a breach under a
8 probable maximum flood?

9 A Under a probable maximum flood?

10 Q Yeah.

11 A No.

12 MR. ALLMON: Just a second, Your Honor.

13 (Pause in proceedings)

14 Q (BY MR. ALLMON) In earlier testimony, I think
15 it was in response to Mr. Ryan, it may have been cross
16 by another party, I think you testified that the
17 floodplain at this site was largely controlled by the
18 dam?

19 A That's correct.

20 Q Is the floodplain within the entire property
21 controlled by the dam?

22 A I think control is -- is a -- not a specific
23 enough term. It's highly important because the streams
24 that we have here, when you model the hydraulics, that's
25 to delineate the floodplain. So the streams we have

1 here would be considered in the subcritical category.
2 So that means that the downstream elevation is what you
3 use to determine the next upstream location as far as
4 the water surface elevation. So the dam sets all of the
5 downstream boundary conditions for the entire floodplain
6 analysis. So if you were to change the dam elevation or
7 the dam water service elevation, then that would
8 certainly have an effect on most of the floodplain on
9 the site.

10 Q Is that true for all of the floodplain on the
11 site?

12 A It may not be. There may be some parts that --
13 well, there's certainly parts that would be affected
14 less than others. I'm not sure that I could say that
15 all of it would be affected or not affected. Certainly
16 the farther you get from the reservoir, the less effect
17 it would have.

18 Q Do you have the Applicant's exhibits in front
19 of you up there?

20 A I think I do.

21 Q And let me refer you to Exhibit Adams 4. That
22 would be in Volume 7.

23 A Okay.

24 Q What is depicted here in Exhibit Adams 4?

25 A I believe it says the landfill completion plan.

1 Q And does this show the extent of the floodplain
2 in relationship to the facility?

3 A I'm not sure. Can you direct me to -- okay.
4 It's just one page.

5 Q Page 2.

6 A I didn't prepare this, so I'm not sure what it
7 shows, but I bet we can read and figure it out.

8 Q Yeah. Do you see a legend there on the
9 right-hand side?

10 A I do. Yeah. I see FEMA Zone A, and then I
11 also see 100-year floodplain.

12 Q And is it your understanding that the 100-year
13 floodplain is a floodplain as you modeled?

14 A It says under Note 4, "100-year floodplain from
15 Part 3 facility investigation and Design Attachment C
16 facility surface water drainage report drawing C2A4."
17 So I believe that's probably the one that I prepared for
18 the application.

19 Q And do you see where the dam is located on
20 this?

21 A I do.

22 Q Can you describe where that is?

23 A Roughly near the center and bottom of the page
24 where it said says FM 1185, that's about 600 feet north
25 of FM 1185.

1 Q Okay. Now, given that location of the dam,
2 does the dam control the extent of the floodplain
3 throughout the area within the permit boundary?

4 A I'm not sure if it controls it throughout. But
5 certainly it affects a large portion of it. I -- I
6 couldn't be sure without, you know, going back and
7 referring to that analysis where those locations would
8 be.

9 Q Are there areas in the northern portion of the
10 permit boundary where the dam does not influence the
11 floodplain?

12 A I would generally say the further you get from
13 the dam, the less influence it has.

14 Q And are there areas there in the northern part
15 of the site where the dam has no influence on the
16 floodplain?

17 A I'm not certain about that.

18 Q Do you have an opinion on that?

19 A Other than -- that I'm not sure what effect, if
20 any, it would have on, you know, some of the -- some of
21 the more further removed locations of the floodplain.

22 Q So earlier when you testified that the dam
23 generally influenced the floodplain on the site, you
24 weren't referring to the entire site?

25 A I was referring to generally the floodplain

1 would be reduced if -- if the dam improvements as
2 presented in the exhibit we referred to were to be
3 installed.

4 Q But such improvements would not necessarily
5 reduce the floodplain there in all areas of the site?

6 A It may not reduce it in all areas but it likely
7 would in many of them.

8 Q But you -- but you can't say that is true for
9 the entire landfill site?

10 A That's correct.

11 Q Is there any way you can delineate which areas
12 of the site, where such improvements would help -- would
13 impact the floodplain versus have no impact on the
14 floodplain?

15 A Can you repeat that?

16 Q Is there any particular area that you would be
17 able to describe where the dam improvements would alter
18 the floodplain versus those areas where it would not
19 alter the floodplain?

20 A Well, certainly like the -- the area to the
21 southeast of the landfill footprint there, it would
22 have -- it would have a significant and probably linear
23 relationship to the flood pool elevation of the
24 reservoir. So everything on the south and east side, I
25 would say, would be greatly impacted as far as being

1 reduced as it relates to the improvements -- proposed
2 improvements to the Site 21 Reservoir.

3 Q What about areas such as that near Pond No. 4;
4 do you see the blue ponds upon the perimeter of the
5 landfill footprint?

6 A I do.

7 Q And do you see the one with the 4 labeled
8 within it?

9 A I do.

10 Q Would alteration of the dam alter the
11 floodplain there near Pond 4?

12 A I can't be certain. It certainly wouldn't to
13 the same extent of the areas that you previously asked
14 about.

15 Q Do you know whether it would to any extent?

16 A Again, I'm not sure. We could determine that
17 through modeling, but I'm just not familiar with that
18 area.

19 Q And that's not an exercise you've done?

20 A It's not, no.

21 MR. ALLMON: Your Honor, that's all my
22 questions. Pass the witness.

23 JUDGE BELL: Redirect?

24 MR. RYAN: No, Your Honor.

25 JUDGE BELL: All right. Thank you

1 Mr. Traw.

2 THE WITNESS: You're welcome.

3 JUDGE BELL: You may step down.

4 Appreciate it.

5 JUDGE QUALTROUGH: Do you have another
6 witness?

7 MR. RYAN: Yes. Can my witness have a
8 short break?

9 JUDGE BELL: We can go off.

10 (Recess: 4:04 p.m. to 4:11 p.m.)

11 JUDGE BELL: We are back on the record. I
12 understand there's another witness to call by the
13 Applicant in rebuttal.

14 MR. RYAN: Yes, sir. We'll call Mr. Gregg
15 Adams.

16 (Witness Adams sworn)

17 JUDGE BELL: Go ahead, Mr. Ryan.

18 GREGORY W. ADAMS, P.E.,

19 having been first duly sworn, testified as follows:

20 DIRECT EXAMINATION

21 BY MR. RYAN:

22 Q Are you the same Mr. Adams that previously
23 testified in this case?

24 A Yes, I am.

25 Q Okay. How would you describe the quantity and

1 quality of sample recovery for the borings conducted for
2 130 Environmental Park at the site?

3 A For which exploration?

4 Q Well, let's start with the 2013?

5 A For the 2013, I would --

6 MS. PERALES: Your Honor, I'm going to
7 object to this testimony. I don't believe that we put
8 on any evidence related to the recovery of 130
9 Environmental Park.

10 JUDGE QUALTROUGH: The what?

11 MS. PERALES: The sample recovery.

12 MR. RYAN: Mr. Courtney's testimony talks
13 about all kinds of problems he had with the recovery and
14 the quality of the samples we recovered.

15 MS. PERALES: With the drilling methods, I
16 think his testimony was with regard to the drilling
17 methods.

18 MR. RYAN: Well, I think this witness is
19 going to tie drilling methods to quality and quantity of
20 the samples collected out of here pretty quickly.

21 JUDGE BELL: Overruled.

22 Q (BY MR. RYAN) Do you remember the question?

23 A No, sir.

24 Q Okay. How would you describe the quality and
25 quantity of samples recovered during the 2013 boring

1 program for 130 Environmental Park?

2 A I would describe the quantity and quality of
3 those samples as excellent.

4 Q How about for the 2016 boring program?

5 A I would also describe those as excellent.

6 Q Was the driller able to push Shelby tubes for
7 the majority of the sampling intervals?

8 A Now, we're talking about the 2013 or both of
9 them?

10 Q Let's just do both.

11 A Okay. We'll talk about them -- yes. For
12 the -- he was generally able to push Shelby tubes.

13 Q And how is it that he was able to push Shelby
14 tubes in this material?

15 A How did he push? He had the proper equipment
16 to push Shelby tubes.

17 Q Okay. And that consists of what?

18 A Consists of a drilling rig that has to be of
19 ample size and have, I'd say -- large enough to push
20 tubes.

21 Q What sampling method do you prefer when samples
22 are being collected in cohesive soils?

23 A In cohesive soils, I would prefer to get
24 undisturbed samples, and Shelby tubes are good ways to
25 get those samples.

1 Q And do you consider the materials being sampled
2 at this site to be cohesive soils?

3 A Yes.

4 Q And why is it that you prefer Shelby tube
5 sampling?

6 A Well, a Shelby tube sample is appropriate for
7 many of the things that I need from the sample from the
8 geotechnical point. It gives an undisturbed sample that
9 I'm able to visually see the soil profile. But it also
10 allows me to run many of the tests that I will need for
11 the design work.

12 Q How do you know if a particular sampling method
13 is appropriate for the sampling being conducted?

14 A Well, if you -- if you get the samples and
15 they're of the quality that you need, then it would be
16 appropriate.

17 Q Let's see. Let me get you -- is Volume 6 on
18 that table there, or is it back behind you?

19 MR. MOORE: It's behind you.

20 THE WITNESS: Six.

21 Q (BY MR. RYAN) Yeah. Would you grab Volume 6
22 of the Applicant's exhibits, please?

23 A (Witness complies).

24 Q And turn to Exhibit Snyder 6, if you would,
25 please.

1 A Okay. I have it.

2 Q Okay. And on Page 2 up in the right-hand
3 corner, do you see the pages?

4 A Yes.

5 Q On Page 2 of Exhibit Snyder 6, what is that?

6 A That would be the sample from the 2016
7 exploration boring BME-37, Sample No. A4 from the depth
8 of 4 to 6 feet.

9 Q Can you tell by looking at this information how
10 that sample was collected?

11 A Yes. The A would designate that that was from
12 an auger.

13 Q Okay. Why was an auger sample collected at
14 that location and depth?

15 A Well, in the upper part of the surface, there
16 was -- there's gravel and cobbles and pebbles. We noted
17 that. And so evidentially at this location, there were
18 too many of them to successfully push a Shelby tube, so
19 you opened the hole up with an auger.

20 Q Okay. And did this sample come from what's
21 been delineated in the permit application as Stratum 1?

22 A I would have to look at a particular boring,
23 but, yes, at that elevation with gravel, that would be
24 Stratum 1.

25 Q Okay. Then if you look at the next two

1 photographs, Pages 3 and 4 of Exhibits Snyder 6.

2 A Okay.

3 Q These are both photographs of sample UA from 10
4 to 12 feet in BME-37?

5 A Yes. That's correct.

6 Q Why are there two different photographs?

7 A The first photograph on Page 3 is the material
8 as it came out of the Shelby tube. You can see that it
9 is a relatively uniform color. The second photograph is
10 the exact same sample after the outer skin has been cut
11 or scraped off to reveal basically the actual sample.
12 What's -- once you push in a Shelby tube, you get a
13 smearing on the outside. As you can see the difference,
14 you can't really see what the sample looks like in the
15 first one, but that's how it comes out of the tube. The
16 second one is with that skin cut away.

17 Q Where were these photographs taken?

18 A These photographs were taken in our office in
19 Mansfield.

20 Q Okay. So are samples always brought to your
21 office in the condition they were removed from the
22 Shelby tube?

23 A Yes.

24 Q And why is that?

25 A Well, we prefer to have the driller in the

1 field focus on getting the sample, labeling the sample
2 and preserving it, so we -- we prefer him, as it comes
3 out, to quickly get it wrapped and labeled. We bring
4 them back to the office and that's where we basically do
5 our observation.

6 Q Is this sample -- did this sample come from
7 what's been delineated in the permit application as
8 Stratum 2?

9 MS. PERALES: Your Honor, I'm going to
10 object again. This whole line of testimony, it's not
11 rebutting anything that we put on during our case in
12 chief. And in fact, it's redundant of the prefiled
13 testimony that was offered and the revised geology
14 report that was offered into evidence during the
15 Applicant's case in chief.

16 All of the process of collecting the 2016
17 samples and even scraping the samples at the office, all
18 of that was described in the prefiled documents offered
19 by the Applicant.

20 JUDGE BELL: Mr. Ryan?

21 MR. RYAN: Well, again, the Protestants
22 put on evidence challenging the adequacy and the quality
23 of the samples that we collected for the site
24 characterization. And Mr. Adams is rebutting their
25 testimony that we didn't collect good samples and get

1 good information to use in characterizing the site.
2 He's just describing what the samples are, and I think
3 he's about to testify that these are representative
4 samples from the various strata that are characterized
5 in the application and offer his opinion about their
6 suitability and usefulness in doing the site
7 characterization.

8 MS. PERALES: I think that's a
9 mischaracterization of the testimony that was offered.
10 The testimony that was offered had to do with the
11 drilling methods that were used and how they were
12 recorded or how they were not recorded. And the fact
13 that -- that in the field, the person who was logging
14 the samples was not Mr. Adams or Mr. Snyder. In the
15 field the person who was looking at the samples at
16 logging them was not scraping them. But the testimony
17 regarding what Mr. Adams or Mr. Snyder did back at their
18 office, that's already in the prefiled evidence that was
19 submitted by the Applicant.

20 JUDGE QUALTROUGH: Mr. Rubinov testified
21 that when he observed the 2016 samples being taken by
22 the Applicant, they didn't scrape them and they didn't
23 look at them.

24 MS. PERALES: Right.

25 JUDGE QUALTROUGH: And I think what he's

1 testifying to now is we wrapped it in the field and took
2 it back to our office.

3 MS. PERALES: Right.

4 JUDGE QUALTROUGH: I think it's directly
5 in response.

6 MS. PERALES: Okay. I think that it would
7 be helpful for everyone to know that we -- we aren't
8 contending that what they said happened in the office
9 didn't happen in the office. I think what Mr. Rubinov
10 was saying was that when he was observing out in the
11 field, he didn't -- he couldn't look at what was in the
12 bores because he didn't have access to touch them or cut
13 them. And the person who was logging out in the field,
14 who was not Mr. Adams or Mr. Snyder, wasn't cutting or
15 scraping them. That was his testimony. And I don't
16 think that he was trying to testify as to what may have
17 happened in Biggs & Mathews' offices. In fact, that's
18 already been provided, as I said, in the prefiled
19 evidence.

20 JUDGE QUALTROUGH: I don't recall
21 Mr. Adams talking about scraping and stuff in his
22 prefiled testimony. It's been a while since I read his
23 prefiled, but I don't recall him saying that.

24 MS. PERALES: I believe it's Mr. Snyder's.

25 JUDGE QUALTROUGH: Is it Mr. Snyder's? I

1 guess you could stipulate.

2 MS. PERALES: I mean, I don't know one way
3 or the other, but neither did my witnesses.

4 JUDGE QUALTROUGH: You would think that's
5 what they're responding.

6 JUDGE BELL: All right. We'll overrule
7 the objection, but, I mean, if there's stuff that's
8 already in the prefiled, we don't need to go back over
9 that.

10 MR. RYAN: Okay.

11 Q (BY MR. RYAN) Do you remember the question?

12 A No, I do not.

13 Q Okay. How about let's try this: In your
14 opinion, is the sample that is -- that is shown on
15 Pages 3 and 4 of Exhibit Snyder 6 representative of the
16 Stratum 2 material collected at the site?

17 A Yes. Those would be representative.

18 Q And then if you turn over to Pages 5 and 6 of
19 Exhibit Snyder 6, in your opinion, is the material
20 pictured there representative of the samples collected
21 in Stratum 3 at the site?

22 A Yes.

23 Q And what's your opinion of the quality of the
24 samples that were recovered -- well, in particular, the
25 quality of the sample that was recovered here at a depth

1 of greater than 60 feet below the surface?

2 A That's a very good sample.

3 Q And in your opinion, were the samples shown in
4 these photographs in Exhibit Snyder 6 appropriate and
5 useful for characterizing the subsurface and the
6 materials collected?

7 A The samples?

8 Q Yes.

9 A Yes.

10 Q Now, Mr. Courtney testified about the potential
11 problems associated with gravel in the near surface
12 materials falling into the hole and affecting ability to
13 collect samples. Do you remember that?

14 A Yes.

15 Q Were any measures taken during the boring
16 programs conducted for 130 Environmental Park to address
17 the potential for falling?

18 A Yes, they were.

19 Q What measures?

20 A Typically, what the driller would do, he would,
21 at the surface, be forced to use an auger to go through
22 the layer that contained the gravel. And as he
23 penetrated through that layer, then he would set a
24 casing pipe through that layer and seal it into the
25 layer below. That would hold the upper part of the --

1 basically case the upper portion of the hole through the
2 layer one to prevent the gravel from falling into the
3 hole as they continued to drill.

4 Q Is that an effective method for preventing that
5 type of material falling?

6 A It's very common and effective.

7 Q Do you know if the Protestants used that sort
8 of casing in the near surface areas to prevent falling?

9 A No. They used a different type of drilling
10 method. They used a hollow-stem auger.

11 Q Okay. Mr. Courtney also offered some testimony
12 about wet rotary drilling methods and what was
13 represented on the logs related to the drilling method?

14 A Yes.

15 Q Did you hear that?

16 A Yes, I did.

17 Q Did you agree with all of Mr. Courtney's
18 testimony regarding that?

19 A No, I did not agree with all of it.

20 Q And did you also hear Mr. Courtney describe the
21 drilling process using various different methods and how
22 a hole is advanced?

23 A Yes, I did.

24 Q Do you agree with him that a hole cannot be
25 advanced using a Shelby tube?

1 A No, I would not agree with that.

2 Q In connection with the -- the boring program --
3 boring programs executed on behalf of 130 Environmental
4 Park in 2013 and 2016, what was the drilling method used
5 to advance the hole and collect samples?

6 A Well, the drilling method that we used was we
7 used a wet rotary rig. Now, there were -- the upper
8 portion, we've already talked -- we've already spoken
9 of. Through layer one, much of that was an auger was
10 used to advance the hole. And then after we cased --
11 after they cased the hole and got through those
12 materials, then they -- the hole was either advanced
13 with a Shelby tube or a split spoon sampler and -- at
14 depth, a drill bit because sampling was intermittent
15 with depth.

16 Q So does the use of a wet rotary drilling rig
17 mean that the only type of -- that the only way to
18 advance the hole is by using wet drilling methods?

19 A No.

20 Q So that rig can be used for various methods?

21 A Yeah. I mean, the purpose of the wet rotary
22 rig is at some depth it becomes difficult to bring -- to
23 bring the cuttings back to the surface. Now, during the
24 time -- during the upper portion of the hole, the hole
25 was being advanced exclusively with either a split spoon

1 or a Shelby tube, continuous sampling. The drilling was
2 done to clean the hole out. Particularly if you push a
3 three-inch diameter tube into a hole, it's hard to go
4 back into the hole -- a 3-inch hole with a 3-inch
5 diameter tube for the next sample. So you have to ring
6 the hole out and make it a little bit larger.

7 Q Were the samples collected in the field during
8 the boring programs for 130 Environmental Park in 2013
9 and 2016 ever sent directly from the field to the
10 laboratory?

11 A Not directly from the field to the laboratory.

12 Q Who made the decisions about which samples
13 would be tested in the laboratory?

14 A Generally, that was me.

15 Q Did you ever identify in the field any samples
16 that you wanted to have laboratory testing?

17 A Yes. I would go to the field to observe the
18 drilling and pick up samples. And as the drilling
19 program went on, I would go once a week and pick up
20 samples from the previous week. Often -- I would look
21 through all of the samples in the field. And for
22 convenience sake, I would go ahead and pull out some
23 representative samples and set those aside in a
24 different box. When I go back to the office, I can get
25 those samples into the lab relatively quickly and have

1 the test already started on those while I was still
2 observing the other samples.

3 Q But all of those samples would be taken back to
4 your office to be inspected before being sent to the
5 lab?

6 A Yes.

7 Q What percentage of the samples that were
8 collected and sent to your office did you inspect there?

9 A 100 percent.

10 Q Okay. So you inspected back at your office
11 every sample that was collected and brought back there?

12 A Yes.

13 Q In your opinion, were the samples that you
14 selected to send to the laboratory for testing biased
15 toward the selection of CH classified materials?

16 A No. As I stated, the purpose was to -- as I
17 bring the samples back was to begin to classify the
18 materials. I would select samples weekly. And what I
19 was attempting to do would be to select samples that
20 would be representative of the materials that were
21 encountered. One, I needed that information to help me
22 correctly classify the materials.

23 Q How would anomalies in the material that you
24 were inspecting affect your decisions about what to have
25 tested in the lab?

1 A Typically, I'm looking to test things that
2 represent the -- the soil profile because I need to
3 adequately describe it. Small anomalies, if I test
4 those and only those, it would skew the information and
5 give a misrepresentation.

6 Q In your opinion, did the Protestants' choice of
7 samples to have laboratory tested tend to focus on
8 anomalies?

9 A It appeared that it did.

10 Q And what do you base that on?

11 A I base that on the samples that were selected
12 and also from Mr. Rubinov's prefiled testimony.

13 MS. PERALES: Your Honors, I'm going to
14 object. I think the witness just admitted that the
15 testimony he's offered is consistent with our prefiled.
16 So I'm not sure what this is rebutting again.

17 MR. RYAN: Well, it -- I think it's
18 rebutting the notion that our samples were biased toward
19 CH clays and that theirs weren't.

20 MS. PERALES: I think Mr. Rubinov
21 testified about the objective of the Protestants' soil
22 boring program. And it was not to characterize the
23 subsurface but rather to test whether everything was,
24 indeed, fat clay. And Mr. Adams just testified that he
25 based the testimony he just gave on Mr. Rubinov's

1 testimony. So I'm not sure what he's rebutting.

2 MR. RYAN: I'll move on to something else.

3 Q (BY MR. RYAN) Mr. Adams, in your opinion, does
4 the shape of the proposed landfill in plan view affect
5 the validity of the slope stability analysis that you
6 did.

7 A No, not at all.

8 Q Why not?

9 A Because I run a two-dimensional slope stability
10 analysis. And for the sections that I run at the
11 landfill a two-dimensional analysis will assume an
12 infinite length of slope. In doing so, it -- it ignores
13 the end conditions of the slope or any resistance force
14 that's provided at the end of the failure. The result
15 of that is, is that a two-dimensional analysis will
16 always be more conservative than a three-dimensional
17 analysis.

18 Q Do you recall Mr. Bratton's testimony about the
19 potential failure of a side slope berm on the landfill
20 followed by the possibility of a domino effect on the
21 lower berms leading to a potential breach of a landfill
22 detention pond?

23 A Partially, I recall.

24 Q Okay. In your opinion, is that a realistic
25 possibility?

1 A No, I'm not able to, I guess, visualize or
2 quite understand the scenario that was described.

3 Q Have you designed and overseen the construction
4 of berms like those proposed on this landfill?

5 A Yes, I have. I have -- in the last 20 years,
6 I've designed and overseen the construction of miles of
7 those types of berms and that -- it -- from -- from
8 across Texas and several sites in Oklahoma.

9 Q Have you been able to observe those berms and
10 how they function over time after construction?

11 A Yes. I -- I do -- many of those berms I
12 designed, was involved in the construction. I do
13 observe and monitor periodically. And the type of
14 failure that I believe I understand the scenario that
15 was described, I've not observed.

16 MR. RYAN: I'll pass the witness.

17 JUDGE BELL: Do we have any
18 cross-examination based on this rebuttal from Plum
19 Creek?

20 MR. WILSON: I'm tempted, but I'm going to
21 say no.

22 JUDGE BELL: All right. How about from
23 Executive Director?

24 MR. TATU: No questions.

25 JUDGE BELL: OPIC?

1 MR. TUCKER: No questions.

2 JUDGE BELL: Caldwell County?

3 MR. MAGEE: No.

4 JUDGE BELL: TJFA and EPICC?

5 MS. PERALES: Yes. Can we have a couple
6 of seconds to confer between us?

7 JUDGE BELL: Yes.

8 (Pause in proceedings)

9 MS. PERALES: Okay. I'm ready.

10 JUDGE BELL: All right. Go ahead.

11 CROSS-EXAMINATION

12 BY MS. PERALES:

13 Q Good afternoon, Mr. Adams. So just to be
14 clear, the boring -- boring program and the drilling of
15 the borings that provided the information for the
16 application in 2013, that was supervised by Mr. Snyder.
17 Isn't that right?

18 A Yes.

19 Q So he would be providing the drilling of the
20 borings and the collection of the samples. Is that
21 right?

22 A He was supervising.

23 Q And the revision to that geology report in
24 2016, that was sealed only by Mr. Snyder. Isn't that
25 right?

1 A That's correct.

2 Q And isn't it true that Mr. Snyder was out in
3 the field in 2013 maybe two times during the borings?

4 A I don't know how many times he was there.

5 Q Okay. How many times were you there?

6 A In 2013?

7 Q Yes.

8 A I was there weekly.

9 Q Okay. Do you recall how many drill rigs were
10 being used?

11 A I know at one time at least two rigs were being
12 used.

13 Q Okay. Do you recall whether there were three
14 rigs on the sites?

15 A I don't recall when I was there witnessing
16 three rigs.

17 Q Okay. And that's not something you would have
18 recorded?

19 A No.

20 Q And were you there -- were you present during
21 the drilling of the borings in 2016?

22 A At least one day.

23 Q Okay. How many days was Mr. Snyder out there?

24 A I do not know.

25 Q So if Mr. Snyder testified that when you --

1 when a boring is being drilled, that pebbles and cobbles
2 may fall down the boring to the depth that you were
3 drilling, would you agree with that?

4 A That is possible. They may do that.

5 Q And it's possible that that happened in this
6 case, isn't it?

7 A My recollection is on the first several holes
8 drilled, that was noted as a problem.

9 Q Okay.

10 A And that's when they went to casing the holes.

11 Q And where was this noted?

12 A It was told to me.

13 Q Okay. By who?

14 A Mr. Snyder.

15 Q Mr. Snyder told you that?

16 A Yes.

17 Q Okay. So -- and again, Mr. Snyder was the
18 supervisor of this whole program in 2013. Right?

19 A Of the program.

20 Q And so if Mr. Snyder testified that Mr. Adams
21 transported the samples directly from the field to the
22 lab, would he have been mistaken?

23 A I transported -- no, I took the samples, and I
24 brought them back to our office. The laboratory that we
25 use has an office in the same building as ours.

1 Q Okay. So Mr. Snyder was mistaken when he
2 testified that you took some of the samples directly to
3 the lab?

4 A Well, we're in the same building, so I brought
5 them back to our office. And so they didn't go to
6 another building. They came to our office.

7 Q But did they go directly to the lab on some
8 occasions?

9 A Well, they -- the lab is next door to us within
10 the building.

11 Q Okay. So did the samples go directly to the
12 lab?

13 A Go directly to the lab? No, I had the sample.

14 Q Okay. So then you're saying that Mr. Snyder
15 would have been mistaken if he testified under oath in a
16 deposition that some of the samples went directly to the
17 lab from the field?

18 A No, because if his intention was that they came
19 from the field to the lab, he could assume that since I
20 brought them back, that I walked into the lab with them.

21 Q So if -- did you ever take some samples back to
22 the office just to have him take them directly to the
23 lab?

24 A Just to have him take them back to the lab? As
25 I testified earlier, I brought the samples back. I

1 had -- and in some cases, I had already pulled the lab
2 samples from the boxes. And when I got to the office,
3 the first thing I did was take them to the lab.

4 Q So you would take them directly to the lab once
5 you brought them back?

6 A I would look at them. And I had to fill out
7 the lab -- I mean, I would lay them out and fill out the
8 lab assignment sheet.

9 Q So if Mr. Snyder testified under oath during
10 his deposition that some samples went to the lab and
11 some went to the office, would he have been mistaken?

12 A I would say that all samples came to the
13 office. I -- I brought the samples back to the office.

14 Q So Mr. Snyder would have been mistaken if
15 that's what he testified to?

16 A I brought the samples back to the office. The
17 lab was next door. I didn't go directly into the lab.
18 I came through our office.

19 Q So Mr. Snyder would have been mistaken?

20 A Apparently.

21 Q Was Mr. Snyder supervising you as you collected
22 those samples?

23 A No. The days that I collected the samples, he
24 did not go to the site with me.

25 Q And is there a written chain of custody that's

1 maintained for the samples?

2 A The ones that go to the lab.

3 Q Okay. And what happened to that chain of
4 custody?

5 A As far as I know that chain -- it was provided
6 to Mr. Ryan.

7 Q And so would the chain of custody show where
8 the samples were before they got to the lab?

9 A Now we're talking about -- which drilling
10 event?

11 Q Are there different chain of custody procedures
12 for the two drilling events?

13 A No. I'm asking are we talking about all
14 drilling events, because my memory -- when I said I gave
15 them to Mr. Ryan, I know that I gave the ones from 2016
16 to him.

17 Q Okay. So if there were written chain of
18 custody documents that existed from 2013, do those still
19 exist?

20 A I don't know.

21 Q Okay. So I think you've testified that you
22 were present in 2013 during the drilling on a weekly
23 basis. Is that right?

24 A Yes.

25 Q So you didn't actually observe all of the

1 sample recovery that was coming out at the field. Is
2 that right?

3 A Only on the days I was on site.

4 Q Okay. Because you weren't present for all of
5 the sampling. Isn't that right?

6 A That's correct.

7 Q Was the push and the length of recovery
8 recorded on any field logs?

9 A The sample interval was recorded.

10 Q Was the push recorded?

11 A That would be the sample interval.

12 Q You think the push means the sample interval?

13 A Yes.

14 Q Okay. Were the -- and so do you know whether
15 the samples were measured in the field?

16 A No, I do not know.

17 Q Is it possible that the recovery was shorter
18 than the push?

19 A Well, I had the sample. And so I looked at the
20 sample. So I know how much was sent back.

21 Q Well, is it possible that the recovery was
22 shorter than the push?

23 A Yes.

24 Q Okay. And how would you know if the recovery
25 was, let's say, 90 percent if it wasn't measured out in

1 the field?

2 A How would I know if it was 90 percent?

3 Q Recovery, sure.

4 A Well, the majority of the sample I had.

5 Q Okay. Do you consider the presence of a
6 sandstone layer to be an anomaly?

7 A Of a sandstone layer?

8 Q Uh-huh.

9 A On this site the average -- depending on -- are
10 we talking in general or for this site?

11 Q For this site.

12 A For this site? Yeah, for the borings that we
13 did -- for the -- depending on the thickness -- that
14 would be an anomaly.

15 Q Okay. What about a siltstone, would that be
16 anomaly?

17 A It depends on the number of borings that we
18 got, the number of samples collected.

19 Q And would a fracture be an anomaly?

20 A It was -- a fracture in 2016, if I recall
21 right, recall in 2016 we saw several of those, so we saw
22 them. They were there.

23 Q Would it be important to you to note the
24 presence of a sandstone as part of the geology?

25 A Well, I won't talk about as part of the geology

1 but as far as logging, what I did if -- a sandstone,
2 would be important to note it.

3 Q Okay. So when you're looking for these -- or
4 observing these -- a sandstone or a siltstone or a
5 fracture, you're doing so as a geotechnical engineer.
6 Isn't that right?

7 A I'm -- as logging material, and then I'm also
8 functioning as a geotechnical engineer.

9 Q Okay. So when you offer an opinion about
10 whether a sandstone or a siltstone is an anomaly, are
11 you doing so as a geotechnical engineer?

12 A Yeah. Based on my observations that a small
13 discrete area is not representative of the whole site.

14 Q Okay. And in fact, the presence of secondary
15 features has relatively no significance to a
16 geotechnical engineer such as yourself. Isn't that
17 right?

18 A It has very little. For that reason, that is
19 one of the reasons, as I'm logging, I continually
20 consult with Mr. Snyder because it means different
21 things to him.

22 Q Okay.

23 A And so I want to be sure as I record it, I want
24 his opinion and input on those features.

25 Q Okay. And Mr. Snyder did not observe all of

1 the samples that were collected in 2013? Isn't that
2 right?

3 A I don't know. You would have to ask him.

4 Q Okay. Neither did you. Isn't that right?

5 A And neither did what?

6 Q You didn't observe all of the samples that were
7 collected in 2013 either?

8 A In 2013?

9 Q Yes, sir.

10 A Yes, I believe I would have observed the
11 samples in 2013.

12 Q Okay. Even the ones that -- well, for the ones
13 that went directly to the lab, did you record your
14 observations anywhere?

15 A All those samples?

16 Q Yes.

17 A No, I did not record those samples, but I did
18 observe those samples.

19 Q Okay.

20 MS. PERALES: Can I have just a minute?

21 (Pause in proceedings)

22 MS. PERALES: I'll pass the witness.

23 Thank you.

24 JUDGE BELL: Thank you. Any redirect?

25 MR. RYAN: No, Your Honor.

1 JUDGE BELL: Thank you, Mr. Adams. I
2 appreciate it.

3 Any further rebuttal from the Applicant?

4 MR. RYAN: Yes, but if it's okay with you,
5 we'd like to do it in the morning.

6 JUDGE BELL: Fine by us.

7 (Laughter)

8 JUDGE BELL: Go off the record.

9 (Proceedings recessed at 4:53 p.m.)
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C E R T I F I C A T E

STATE OF TEXAS)
COUNTY OF TRAVIS)

We, Dalia F. Inman and Jodi Cardenas, Certified Shorthand Reporters in and for the State of Texas, do hereby certify that the above-mentioned matter occurred as hereinbefore set out.

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IN WITNESS WHEREOF, we have hereunto set our hands and seals this 9th day of September, 2016.



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