

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ADMINISTRATIVE LAW JUDGES

IN THE MATTER OF:)
) No.: CWA-07-2018-0095
C&S ENTERPRISE, LLC.)
)

Courtroom 145
U.S. District Courthouse
123 East Walnut Street.
Des Moines, Iowa 50309
Thursday,
October 4, 2018

The parties met, pursuant to the notice, at
9:00 a.m.

BEFORE: HONORABLE SUSAN L. BIRO
Administrative Law Judge

APPEARANCES:
For the Agency:
CHRIS MUEHLBERGER, Esquire
BRITT BIERI, Esquire
U.S. Environmental Protection Agency
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11201 Renner Boulevard
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For the Respondent:
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E X H I B I T S

AGENCY'S EXHIBITS:	IDENTIFIED	RECEIVED
1 through 32	675	675
AX-1, 30A	675	675

C O N T E N T S

VOIR

WITNESSES: DIRECT CROSS REDIRECT RE-CROSS DIRE

For the Respondent:

Gerald Hentges 556 601 662 -- --

P R O C E E D I N G S

- 1
- 2 (9:00 a.m.)
- 3 JUDGE BIRO: Be seated.
- 4 COURT REPORTER: Good morning.
- 5 JUDGE BIRO: Good morning, Mr. Jones.
- 6 Good morning, gentlemen. Are there any
- 7 preliminary matters before we begin?
- 8 MR. McAFEE: I don't have anything, Your
- 9 Honor. Thank you.
- 10 MR. MUEHLBERGER: Complainant doesn't have
- 11 anything either, Your Honor.
- 12 JUDGE BIRO: Okay. Mr. McAfee, would you
- 13 like to call your next witness?
- 14 MR. McAFEE: Yes, Your Honor. We call
- 15 Gerald Hentges.
- 16 JUDGE BIRO: Good morning, Mr. Hentges.
- 17 MR. HENTGES: Good morning, Your Honor.
- 18 JUDGE BIRO: Would you stand in the witness
- 19 box and give the opportunity for the court reporter to
- 20 swear --
- 21 MR. HENTGES: Yes, Your Honor.
- 22 JUDGE BIRO: -- you in?
- 23 COURT REPORTER: Good morning.
- 24 (Witness sworn.)
- 25 COURT REPORTER: Thank you. Could you spell

1 and state your last -- your name for the record,
 2 please?
 3 THE WITNESS: Yes. It's Gerald,
 4 G-E-R-A-L-D, HENTGES, H-E-N-T-G-E-S.
 5 COURT REPORTER: Thank you.
 6 Whereupon,
 7 GERALD HENTGES
 8 having been duly sworn, was called as a
 9 witness and was examined and testified as follows:
 10 DIRECT EXAMINATION
 11 BY MR. MCAFEE:
 12 Q Good morning, Mr. Hentges.
 13 A Good morning.
 14 Q You've stated your name and spelled it for
 15 the record. Do you go by Gerald?
 16 A I go by Jerry.
 17 Q Okay. And it's okay if I address you as
 18 Jerry?
 19 A Yes, sir.
 20 Q All right. You've been designated as an
 21 expert in this case by the Respondents. Could you
 22 give us a little of your background? But before we
 23 get to your expert credentials, give us a little
 24 background on your personal -- where were you born?
 25 A I was born in northeast Iowa, Alta Vista.

1 Q Did you grow up there?
 2 A Till about the fourth grade, and then we
 3 moved to Des Moines, Iowa.
 4 Q Okay. So, you're a -- you're an Iowan?
 5 A Yes, sir.
 6 Q Okay. Went to school here in Des Moines
 7 then?
 8 A I studied forestry at Iowa State University
 9 for two years. And then I transferred to the
 10 University of Arizona in, in the hydrology department.
 11 Q Okay. I've placed on the screen what's been
 12 designated in this case as RX-2, and I've got -- I'll
 13 slide it up. I've got page one up. What is this?
 14 A This would be my resume.
 15 Q Okay. And I just want to briefly go through
 16 a few things. Listed on the right-hand side is your
 17 education, and let's see. I need to slide it down a
 18 little. Okay. You mentioned Iowa State University,
 19 and then your B -- B.S. degree from University of
 20 Arizona, and that is in what?
 21 A It's in hydrology.
 22 Q Okay. And then you did some post-graduate
 23 work there in hydrology also?
 24 A Yes, sir.
 25 Q Briefly, what i -- what does a hydrology

1 degree entail?
 2 A Well, my course of study was service and
 3 groundwater. It's currents, movement,
 4 characteristics. So, groundwater and streams.
 5 Q You also have listed there, registrations.
 6 You're a, you're a professional hydrologist; is that
 7 correct?
 8 A Yes.
 9 Q And it's listed in Arkansas. Is that, is
 10 that different among states?
 11 A It varies among states, but the general
 12 requirements are the same.
 13 Q Okay.
 14 A Iowa does not certify professionals in
 15 geology or hydrogeology.
 16 Q And so, that's why Iowa is not listed?
 17 A Yes.
 18 Q Let's talk about your work history. After
 19 your education what did you do? And I know it's
 20 listed here. If I can -- I think I've got it covered
 21 there -- so everybody can see it -- but give us a
 22 brief background on your work history.
 23 A Well, I, I worked for six years as a project
 24 scientist at E.A. Hickok and Associates, which was
 25 actually purchased by James M. Montgomery.

1 Q And where was that?
 2 A That was in Des Moines.
 3 Q Okay. And that, according to your resume,
 4 was 1983 to 1989, is that right?
 5 A That's correct.
 6 Q And then what?
 7 A Then I went to work for Terracon in 1989 and
 8 served as a project manager, eventually becoming a
 9 senior project manager and associate.
 10 Q And so, you've been with Terracon ever, ever
 11 since leaving James M. Montgomery?
 12 A Yes, sir.
 13 Q And so, if, if my math is right, we're
 14 approaching 30 years?
 15 A Thirty years at Terracon this month.
 16 Q Okay. And you've listed there your various
 17 positions with Terracon. And -- what do you currently
 18 do at Terracon?
 19 A I'm a senior project manager that reviews
 20 proposals, reports, and I conduct some project work on
 21 my own as a project manager.
 22 Q Prior to that were you -- well, does your
 23 current position entail being out in the field much?
 24 A A fair amount. Less in more recent years,
 25 but I often go out in the field to supervise

1 associates.

2 Q In your previous positions in your 30 years

3 with Terracon, were you out in the field more?

4 A Yes. Yes.

5 Q Does your current position or previous

6 positions also entail -- does it entail -- I'll call

7 it computer work -- reviewing maps online, et cetera,

8 much as what you've heard testified to in this case?

9 A Yes, it does.

10 Q All right. Let's take a look at -- I'll

11 move it over here. You've got project experience, but

12 you've listed water resources. Is that similar to the

13 work you've done in this case, or is that different?

14 A That would be similar, yes.

15 Q Okay. And then, also, do you have -- you've

16 listed wetland mitigation on here as one of your

17 project experience areas. Is that similar to any work

18 you did here regarding any wetland issues in this

19 case?

20 A Yes, wetlands and Waters of the U.S.

21 Q Have you done a lot of work in that area?

22 A Yes, I have.

23 Q Can you give us a brief rundown?

24 A Well, Ter -- at Terracon, as far as Waters

25 of the U.S. and wetlands go, I suppose in 1992 we

1 started doing delineations. I developed that program

2 for our office in the region. And, you know, that

3 entails going to a site, determining -- using the

4 Corps manual or the FSA method, whether a wetland was

5 present, and if so, what are the boundaries. Taking

6 that information, that would include data points and

7 aerophotography and soils, mapping them, putting it

8 into a report to submit to the NRCS or the Corps of

9 Engineers for review and approval.

10 Then, on top of that, oftentimes, the

11 project would go to a mitigation phase. If a wetland

12 is going to be unavoidably impacted, then we would

13 help the applicant determine how to compensate for

14 that impact.

15 Q I guess, if, if I can, I'll summar -- have

16 you done a, a, a lot of work in the past as compared

17 to the work you did in this case?

18 A Yes.

19 Q Now, I don't believe in your CV you listed

20 any cases that you may have testified in. Well, first

21 of all, have you testified as an expert in any cases?

22 A Yes.

23 Q And on issues similar to this case?

24 A Yes.

25 Q In fact, have you, have you testified as an

1 expert in cases that I've had?

2 A Yes, I have.

3 Q Okay. How many cases -- and have you

4 testified as an expert, expert in cases with attorneys

5 involved other than me?

6 A Yes, I have.

7 Q Okay. Do you have an idea about how many

8 cases you've testified in?

9 A A couple dozen.

10 Q Okay. All right. And by cases -- I maybe

11 could be a little more specific. Are we talking about

12 cases in both state and federal court, as well as

13 administrative proceedings, such as this one?

14 A Yes, we are.

15 Q Okay. Okay. Now, let's move to this -- the

16 case at issue here. What did you do when you were

17 first contacted about this case and about serving as

18 an expert?

19 A I reviewed the filed information that I

20 provided. And then, I visited the site.

21 Q When did you visit the site?

22 A It was late March of 2018.

23 Q And is that date in your report?

24 A It is.

25 Q Okay.

1 A I believe it was the 31st.

2 Q I think the record will show in your report

3 you're one day off. It was March 30, but that's okay.

4 And we'll, we'll get to your report here later, but

5 you have issued a report in this case, correct?

6 A Correct.

7 Q And prior to issuing that report, what did

8 you -- you say you've reviewed materials. Do those

9 include the materials provided in the pre-hearing

10 exchange from EPA?

11 A Yes. That's correct.

12 Q And what other materials did you review?

13 Just a general idea.

14 A I went to the Iowa State website and looked

15 at the aerial photographs they had that covered the

16 site. And I reviewed some soils maps on the USDA soil

17 web survey.

18 Q And we may get into more of the materials.

19 Many of them are mentioned in your report, is that

20 right?

21 A That's correct.

22 Q Yeah. Okay. I think we'll move right into

23 the exhibits now. I want to start with an exhibit

24 that has been discussed here. It's Agency Exhibit 24

25 and then Respondent's Exhibit 3.

1 I'm showing you first -- maybe. Let's see.
 2 MR. MCAFEE: I have the controls here to
 3 zoom in and out, do I, Chris, or if you do, I --
 4 MR. MUEHLBERGER: Sure. I can't promise
 5 I'll do it well, but --
 6 MR. MCAFEE: All right.
 7 MR. MUEHLBERGER: Better than me.
 8 MR. MCAFEE: That's a pretty low bar, Chris.
 9 MR. MUEHLBERGER: Yeah.
 10 MR. MCAFEE: Thank you, Chris. That's good.
 11 I appreciate it.
 12 BY MR. MCAFEE:
 13 Q Okay. We have on the screen what's been
 14 marked as Agency Exhibit 24, page one.
 15 Have you reviewed that?
 16 A Yes, sir.
 17 Q And what is that?
 18 A It's a LiDAR map of the Morrow property that
 19 we've been discussing.
 20 Q Okay. And I don't know if this was a good
 21 place for me to start, but if there's any background
 22 you need to give before discussing this, please go
 23 ahead. We're going to get into a lot more today,
 24 obviously, but tell me is it -- well, did you start
 25 with this?

1 A Yes. I looked at this and it's available on
 2 the Iowa State website. It's a hill shade LiDAR,
 3 meaning that the light detection radar adds an aspect
 4 to the print showing relative elevations, so you can
 5 see the high spots and the low spots.
 6 Q Now, the actual image you reviewed, did you
 7 review it online or did you review a paper copy, such
 8 as this?
 9 A I reviewed it online.
 10 Q Okay. Now, I'm going to show you what's
 11 been marked as Respondent's Exhibit 3. And tell me
 12 about that.
 13 A Well, this was part of my report. And what
 14 I was showing here is that the, the lower portion of
 15 the drainage way has areas that, you know, appear to
 16 be the same elevation as the farmed fields on either
 17 side. So, in, in reviewing this I'm not seeing a
 18 defined channel that would lead to the interpretation
 19 that there's a, a bed in a bank or an ordinary
 20 high-water mark.
 21 Q Okay. I think if we, if we look here, where
 22 I'm pointing with the pen -- and it's apparent on the
 23 exhibit. For purposes of the record, it's -- well,
 24 would you state what I'm pointing to, and then maybe
 25 we'll describe it.

1 A Right. I've added the annotation locations
 2 where channel was not apparent along grass drainage
 3 way.
 4 Q And then you've drawn, what -- how many
 5 arrows?
 6 A Four.
 7 Q Okay.
 8 JUDGE BIRO: No.
 9 THE WITNESS: Five.
 10 BY MR. MCAFEE:
 11 Q And other than that annotation, as you've
 12 described it and the five arrows, did -- was -- did
 13 you add anything else to this exhibit, which was
 14 originally AX-24, page one?
 15 A No, I did not.
 16 Q Okay. Anything further you want to point
 17 out about the arrows you added?
 18 A No, just that they're - it, it also appears
 19 the lower portion of this grass drainage way, some of
 20 the elevation is obviously due to vegetation. Some of
 21 the change in, in aspect appears to be due to
 22 vegetation.
 23 Q Now, you're referring to this as a grass
 24 drainage way. And I'm sure that description is going
 25 to elicit some questions, both from me and opponent's

1 counsel, because it's been described differently in
 2 this proceeding, hasn't it?
 3 A Yes, it has.
 4 Q At least the portion you've been present
 5 for. We'll, we'll get back to that. But you're
 6 describing what's been, as you've heard the testimony
 7 here, described as a, what, tributary, is that
 8 correct?
 9 A Yes.
 10 Q And a channel? Is that correct?
 11 A Yes.
 12 Q Okay. Now I want to turn to -- and you met
 13 -- I believe you just mentioned the lower portion and
 14 mentioned the -- being more level; is that what you
 15 said, or --
 16 A Yes, sir.
 17 Q Okay. I want to turn to Agen -- Agency
 18 Exhibit 31, page 13. Okay. I placed this exhibit on
 19 the screen, and I'll slide it up, so you can see
 20 the -- there it is. A, A, AX-31, page 13 of 26. Now
 21 I'll slide it down. And I realize we can zoom out,
 22 but I think it helps to keep it this close, doesn't
 23 it, to see more of the features?
 24 A Yes, I believe it does.
 25 Q If you need me to zoom out, why, we can

1 certainly do that, but could you describe this exhibit
2 for us?

3 A Well, this exhibit is the United States
4 geological survey quadrangle map of the Morrow
5 property. And it's showing elevational contours,
6 lines of equal elevation over the area.

7 Q And there are -- well, go ahead and explain,
8 if you would, what, what, what the importance of the
9 elevational contours are.

10 A Yes. When I, when I look at this exhibit in
11 reference to the drainage way, it's apparent to me
12 that the, the fluvial mechanics or the stream creating
13 physics are apparent in the -- first of all, the depth
14 of water - the, the depth of flow in a channel area
15 controls the eroding and the sediment transport
16 capability of water.

17 So, in the upper regions, where the contours
18 are closer together and there's more slope or fallen
19 elevation, rainfall and run-off will collect quickly,
20 get deep, and then flow downstream. And the flow will
21 accelerate as a force until it's balanced by the
22 turbulence of the water and the friction that the
23 water receives along the sides. The velocity is the
24 key to the eroding and the sediment transport that
25 will occur in the upper portion. And that's why in

1 reviewing the aerials historically, and even
2 currently, you start to see the erosion processes in
3 the upper portion that include meandering or
4 curvilinear features. So, there's a lot of eroding
5 going on up here, sediments being picked up and moved
6 and then dropped. But velocity is the key balancing
7 point and flow depth also, as I started out
8 mentioning.

9 As the water reaches the lower portion,
10 where -- of this drainage way, where it's flatter --

11 Q Can -- and if I could interrupt a minute.
12 Where would that be on, on AX-31, page 13? Is, is
13 there a --

14 A It would be about at the point of the upper
15 arrow, the arrow toward the top of the two.

16 Q Okay. There's two red arrows on here. You
17 did not place those there, correct?

18 A No, sir.

19 Q No. But there are two arrows and you're
20 talking about what would be -- as one looks at it --
21 the left-hand arrow, correct, or is that the --

22 A Yes.

23 Q You said the upper arrow. Anyway, go ahead.

24 A Right. The inter -- interval between these
25 contours is about 10 feet. So, from the upper portion

1 of the erosional feature along the drainage way
2 there's about a 25-foot drop until it reaches the
3 lower portion of the drainage way, where the area's
4 flatter and, and it -- the slope is less and it's
5 about the same elevation as the farm fields on either
6 side of it.

7 So, as I was saying, the depth of flow and
8 the velocity are the key points for erosion. When the
9 water reaches the point of the, of the lower flatter
10 area, it's not eroding much anymore. In fact, it, it
11 -- the velocity drops because gravity is what's
12 pushing that. It drops its sediment and it doesn't
13 display the curvilinear or meandering components that
14 it does higher up in the watershed. And it, it
15 appears in all the information I've looked at -- the
16 mapping aerial photographs, the soils maps -- that
17 it's a grass drainage way from that point down, and
18 hence, it's more straight.

19 Q Were you on the site before the work
20 occurred in 2015?

21 A No, sir.

22 Q Okay, and, and -- but you have been on the
23 site since then, but it's after it was disturbed?

24 A Yes.

25 Q Okay. You may have mentioned this, but what

1 is the drop in what you've referred to as a lower
2 portion and many others have in this case? It's been
3 -- you'll see photos after a bit, where there's a
4 crossing. And I think it's been described as that's
5 where -- kind of, where the lower portion generally
6 begins, but that area that you -- we've described,
7 what is the drop? Can you tell from that map the drop
8 between -- in the lower portion, from maybe around the
9 red arrow -- the left-hand red arrow, down to Deep
10 Creek?

11 A Down -- these -- again, these are 10-foot
12 contours, so it's not very exact. But, you know, it
13 appears that there's only about a 10-foot drop from
14 the top arrow down to Deep Creek -- you know, perhaps
15 12 or 15 -- whereas, in the upper portion of the
16 erosional feature to the north and west of the
17 property, it's, you know, in the range of 25 to 30
18 feet a drop.

19 Q Now, on this exhibit there is also a --
20 between the two red arrows, and then I -- I'll let you
21 describe it. It extends on down to what appears to be
22 Deep Creek. Is there a blue line?

23 A Yes, a blue dash line.

24 Q Yes. And I believe Mr. Stokely (phonetic)
25 testified to this yesterday. But explain to us what

1 that blue line is, blue dash line.
2 A Well, that -- the blue line drainage way is
3 an interpretation that the U.S. Geological Survey made
4 when they were mapping the area. And, you know, it
5 indicates intermittent or ephemeral stream or drainage
6 way that would not have water in it all the time, but
7 would, would flow under certain conditions.

8 Q Based on your knowledge of this case,
9 everything you've reviewed, do you agree with that
10 blue line?

11 A No, I don't. I -- and this happens because
12 the U.S. Geological Survey can't field truth all of
13 these aspects of the map. They use stereograph --
14 they use stereographic analysis to determine a lot of
15 the elevations' set control points. And although they
16 did a lot of surveying and they did a lot of review,
17 certainly, when they looked at Deep Creek they'd say
18 well, that's a perennial stream. But they didn't look
19 at every one of these drainages in the field, and so
20 they had to make interpretations. And I think -- in
21 here, frankly, I think their interpretation is, is not
22 correct. This is more of an erosional feature. It
23 likely only flows when it rains and it shouldn't have
24 a blue dash line, in my opinion.

25 Q Okay. Now I want to turn our attention

1 to -- I'll put up on the screen Agency Exhibit 28.
2 Okay. I'll slide it up so you can see the reference
3 AX-28, page one of one, and I'll slide it down.

4 Again, I, like, have it expanded to this
5 view because I think it's easier to see. But would
6 you -- first of all, have you reviewed this exhibit?

7 A Yes, I have.

8 Q And tell me what your review entailed.

9 A Well, this is an exhibit that shows the U.S.
10 geological survey quadrangle map at a smaller scale,
11 meaning that it covers a larger area. And it shows
12 the water shed above the drainage feature that we've
13 been discussing. It's where all the water that rains
14 on the area would eventually enter Deep Creek at, at
15 the southeast portion of the blue polygon.

16 Q Now, there are topographic lines within this
17 exhibit, right?

18 A Yes.

19 Q Do they coincide, as far as you can tell,
20 with what we looks -- looked at in the previous
21 exhibit?

22 A They are the same.

23 Q Okay. There's -- there has been testimony
24 in this case -- well, first of all, do you know how
25 large an area is marked in blue?

1 A It's indicated that it's 100 --
2 approximately 100 acres.

3 Q And do you have an opinion as to whether
4 that is a large area, small area, whatever -- how
5 would you describe it relative to this case and the,
6 the issues we're looking at in this case?

7 A Right. I mean, a quarter section is about
8 160 acres. This is a little more than half that.
9 100-acre water shed is not big. It's, it's small
10 compared with the ones we usually look at and
11 evaluate. So, in my opinion, it's a small area. It's
12 a quarter of a mile square.

13 Q Okay. I think now we'll turn to some of the
14 exhibits that you've reviewed that are the aerial
15 photos showing the -- primarily the lower portion in
16 this case. And they've been reviewed. You've been
17 present here for part of that review. But they've
18 been reviewed extensively in this case. But have you
19 reviewed all of them?

20 And I should tell you what I'm talking
21 about. We're talking about Agency Exhibit 26. We're
22 talking about Agency Exhibit 10, Agency Exhibit 31,
23 Agency Exhibit 31, Appendix B. Do those sound
24 familiar to you, and have you reviewed them?

25 A Yes. I reviewed all those.

1 Q Okay. And I think what we'll do, if --
2 we'll go through a few of them, try and look at some
3 that are representative. And then if you want to see
4 more, you can -- we certainly can do that, but we
5 probably won't go through all of them in the interest
6 of time, but also try and be representative, I guess,
7 is what I'm saying, but we're not trying to exclude
8 anything. We'll take a look at a few of those and
9 have you review them with the Court here.

10 We'll start with Agency Exhibit 26, page
11 one. And for Agency Exhibit 26, just in general, is
12 it your understanding that these are -- well, these
13 are close-ups -- I'll move it up, so you can see it.

14 As you review these, I -- did you compare
15 these to Agency Exhibit 10?

16 A Yes.

17 Q And is it your understanding these are
18 close-ups of many of the -- or some of the exhibits in
19 Agency Exhibit 10?

20 A Yes.

21 Q And as far as being close-ups, does that
22 help you to be able to see this closer up, and for the
23 Court to be able to see it during this proceeding?

24 A Yes, I believe it does.

25 Q Did you also look at these images online

1 yourself?
 2 A Yes.
 3 Q Okay. So, you're not -- well, are you
 4 basing your opinions on what you see here on the
 5 screen. Or does it also include what you saw online
 6 with maybe a clearer view?
 7 A It's based on both, yes.
 8 Q Okay. All right. Take a look at Agency
 9 Exhibit 26. I believe it has a date of March 14,
 10 2010. Tell me what you see there and what your
 11 opinions are.
 12 A Well, in the lower portion there appears to
 13 be some flow paths present in the vegetated drainage
 14 way, but nothing in this photo that would, you know,
 15 indicate there's a channel or comprised of a defined
 16 bed and bank or ordinary high-water mark.
 17 Q I think we'll -- yeah. Let's review a few
 18 more and if we need to come back to this for anything,
 19 we can. Agency Exhibit 26, page two, dated July 3,
 20 2010, so about four months later.
 21 A Yes, and here, the, the vegetation isn't
 22 obscuring the photo as badly as the previous one, and
 23 there's obviously runoff. You can see the water and
 24 the drainage way flow path. But again, I don't see
 25 anything that would indicate there's a, a channel.

1 Q Again, I think -- well, let's look at a few
 2 more and then we may come back to this. I may have
 3 some more questions there. Well, let's do it now.
 4 All right. There's been testimony -- Mr.
 5 Stokely, I believe, testified contrary to what you
 6 just said about a channel, and when I look at that, I
 7 see something. That dark area is pretty pronounced.
 8 Why do -- why don't you believe that's a channel?
 9 A You know, essentially because of the other
 10 aerials I've seen, where the vegetation during periods
 11 of runoff, where - there, there's a clear flow path in
 12 the drainage way. Vegetated drainage way, when water
 13 flows through it, will seek the lowest point it can
 14 find, collect there, and flow downstream. But in
 15 looking at this photo there's no way to determine
 16 whether there's a defined bed and bank or ordinary
 17 high-water mark.
 18 Q Is any of that based on the size of that
 19 blue area in the lower portion as compared to the,
 20 say, Deep Creek?
 21 A Yes, and if you look at Deep Creek in this
 22 photo due east of the drainage way, just a short
 23 distance below and above the labeling Deep Creek, you
 24 can see what appears to be some elevational change in
 25 a couple spots indicating that, you know, that's

1 likely a channel.
 2 Q All right. We'll go to Agency Exhibit 26,
 3 page three. This was taken December 18, 2010.
 4 A Yes. And it, in this photograph, again, you
 5 can see it doesn't appear there's water flowing at
 6 this point in the drainage way. You can see a, a flow
 7 path in about the center of it, a linear feature, but
 8 in other parts that's not visible, indicating to me
 9 that recently the water that flowed through there,
 10 just flowed -- just traveled through the, the
 11 vegetation in the lowest spot it can find. And in
 12 this particular linear area it dropped some sediment
 13 or, you know, perhaps eroded a small zone, which I
 14 think occurs in different spots in the drainage way
 15 over time.
 16 Q Just stepping back a minute, can you explain
 17 -- the -- I'll put it this way. Does it take much
 18 water runoff -- does it take a large volume to -- for
 19 it to concentrate into a flow path. Or does a small
 20 amount even create a flow path?
 21 A Even a small amount will flow and it'll flow
 22 in the same general area, creating a flow path.
 23 Q All right. Let's go to page four of Agency
 24 Exhibit 26. This is dated January 4, 2011. So, we're
 25 taking these in chronological order as they are

1 designated in the exhibit -- but go ahead.
 2 A Well, again, here, there doesn't appear to
 3 be flow. You see the same linear feature and the
 4 absence of that feature in other portions of the, of
 5 the vegetated drainage way.
 6 Q We'll now go to page five of AX-26. That's
 7 July 19, 2011.
 8 A Again, there doesn't appear to be any flow
 9 in the drainage way. You know, here, there, there are
 10 portions that appear to define a flow path. It's not
 11 real clear. They're discontinuous. And there's no
 12 clear indication that a channel's present.
 13 Q Okay. Let's -- I -- just for comparison's
 14 sake, I'm going to put up AX-11 -- excuse me -- AX-10,
 15 page 11, which is of the same date that I believe this
 16 previous exhibit, AX-26, page five was, at a closer
 17 view. Does that -- does looking at that closer view
 18 that I previously had on the screen help you make a
 19 determination?
 20 A Yes. The closer view is better, although
 21 some of the same things are shown in, in, in the --
 22 Q Now, again --
 23 A -- a little --
 24 Q -- when you reviewed these yourself in
 25 preparing your report, would you have reviewed them on

1 a digital copy -- excuse me -- digital copy?

2 A Yes. It would have been about this scale
3 and I would have zoomed in -- or I did zoom in and
4 look at various aspects of the --

5 Q Okay.

6 A -- drainage way.

7 Q Okay. Page six of AX-26. This is dated
8 June 26, 2013, so almost two years later.

9 A Yes, and here, a flow pathway is apparent.
10 By the dark line it's discontinuous, indicating that,
11 you know, perhaps this -- given the time of year,
12 perhaps this photo shows standing water left behind
13 after an event.

14 Q At, at, at some point, you know, there --
15 well, yesterday, during Mr. Stokely's testimony there
16 was a fair amount of discussion about shadows that
17 show up in these photos. Do you see anything here or
18 in any, in any of the previous exhibits that would --
19 you want to -- that you have any opinion regarding the
20 shadows and how they may impact any determination of a
21 channel?

22 A You know, actually, I agree with most of
23 what Mr. Stokely says. When you're looking for water
24 you do look for a dark tone. The, the concern I have
25 is that, you know, a lot of other things cause dark

1 tones: wet soil, shadows. So, it's not always a
2 reliable indicator of a given situation.

3 Q Okay. Turning to page seven of 11 of AX-26,
4 this is dated July 12, 2013. Please explain what you
5 observed there when you reviewed it -- both now and
6 when you reviewed it previously.

7 A Yes. There's a -- it's summer, so the
8 vegetation's growing. The cro -- crops in the field
9 are coming along. In the drainage way area there's a
10 flow path present, but it's discontinuous. And it
11 does not appear that water's flowing.

12 Q Page eight of AX-26, taken September 16,
13 2014.

14 A Yeah, w -- a later time in the year than the
15 previous photo. There's a flow path in the drainage
16 way, but it, it, it you know, in areas it appears
17 there's, you know, there may be more than one flow
18 path parallel to each other, kind of indicating that
19 perhaps erosion deposition is occurring in this area,
20 and there's, there's -- it's braiding a little bit.

21 Q Okay. And page nine. I believe this is --
22 there are 11 pages to this exhibit, but -- well, let's
23 do page nine. And then we'll talk about the last two.

24 MR. BIERI: What exhibit -- is this 26?

25 MR. MCAFEE: Yes.

1 MR. BIERI: Thank you.

2 MR. MCAFEE: I'm sorry. AX-26, page nine.

3 BY MR. MCAFEE:

4 Q And this is dated March 9, 2015. And you
5 were present during the testimony yesterday and you've
6 reviewed the file. Is it your understanding the
7 respondent did the work at issue in this case in 2015?

8 A Yes. That's my understanding.

9 Q Yeah. Go ahead.

10 A So, as far as this aerial photograph goes,
11 it, it, it appears there is runoff at this point in
12 the drainage way. It's hard to tell, but there's
13 points where it may not be continuous, so it could be
14 right after a runoff event, where there's standing
15 water, but there's a flow path present in the upper
16 and the lower portion. It's a bit discontinuous in
17 the lower portion --

18 Q Okay.

19 A -- and no real clear indication there's a
20 channel.

21 Q All right. Just what I was going to ask
22 you. I think it's been testified to that the dark
23 area would indicate a channel in that lower portion.
24 Let's take a look over here. My pen is pointing to an
25 area at Deep Creek, is that correct?

1 A Yes.

2 Q And is there a dark area there?

3 A Yes. That's a shadow. Based on the shape
4 of it, the, the, the sun is probably to the south or
5 the bottom of the figure. And typically, that would
6 indicate that there's a steep bank there.

7 Q And again, I think you've testified to this,
8 but of course, Deep Creek is much larger; is that
9 right?

10 A That's correct.

11 Q Is there any way you can tell from these
12 photos that we've reviewed so far whether there is a
13 bed and bank in the lower portion of what you're
14 describing as a drainage way?

15 A No, there's really not. And it's a standard
16 issue with the review of all aerial photography. It
17 just simply doesn't always indicate the location of
18 wetlands or other waters in the U.S. I looked at a
19 lot of it and you really need the field data, the
20 photographs of the, of the direct condition, and the
21 measurements -- the documentation of a bed and a bank
22 and a high-water mark.

23 Q Now, you were present yesterday during
24 Mr. Stokely's testimony and you heard the experience
25 Mr. Stokely has with reviewing aerial photography --

1 the training. Have you had any training specifically
2 in that area?
3 A No, I have not.
4 Q Okay.
5 A But I've looked at hundreds of reports,
6 where project managers provide the aerial photography.
7 And it, it, it really -- oftentimes, you can feel a
8 certain feature or condition is present and yet, the
9 field data and ground photographs don't bare it out.
10 Q We'll come back to that issue, I think,
11 after a bit. Let's finish. There are two more pages
12 in this exhibit. Whoops. I should have kept -- I
13 didn't turn it over to page 10. This is September 20,
14 2015, which the record shows was after the date
15 Mr. Morrow did the work. I don't know that we need to
16 take a look at that based on -- you're welcome to give
17 any opinion there. I just thought I'd show it to you.
18 A Yes. I mean, it's really hard to make any
19 interpretation of service water runoff expression from
20 this photo, but -- so, it's just -- you know, it's
21 very difficult. I don't --
22 Q Okay. And the same with page 11. It's June
23 8, 2016. Again, this is after the work has been done,
24 the tile has been installed. Any, any testimony there
25 that you want to provide?

1 A Well, it's obvious there's the vegetational
2 difference along the former drainage way, and there
3 are either some shadows or perhaps standing water in,
4 in pockets, discontinuous in the area, the former
5 drainage way.
6 Q Okay. We've reviewed these photos in AX-26,
7 every one of them. Didn't want to leave anything out
8 there.
9 Let's go -- I -- of course, those have all
10 been from 2010 on, nothing previous to that. Did you
11 look at photos that were in the file previous to that
12 that helped form your opinion as to the -- what this
13 drainage way was, whether it was jurisdictional or
14 not?
15 A Well, yes.
16 Q I don't think we'll go through all of those,
17 but I'll, I'll put up AX-31, page three. And that is,
18 of course -- let me make sure I have everything
19 correct here. I apologize. It's AX-31, Appendix B,
20 page three.
21 MR. MCAFEE: Britt, do you want me to wait
22 till Mr. --
23 MR. BIERI: No.
24 MR. MCAFEE: Okay.
25 MR. BIERI: Go ahead.

1 MR. MCAFEE: All right. I'll be glad to --
2 MR. BIERI: No, no. I didn't say that to
3 offend you.
4 MR. MCAFEE: I mean, we can take a short
5 break, if you'd like.
6 MR. BIERI: No. Keep going, unless Her
7 Honor wants -- do you want to take a break?
8 JUDGE BIRO: No.
9 MR. BIERI: Okay. Thank you.
10 MR. MCAFEE: I just -- if --
11 MR. BIERI: I appreciate it.
12 MR. MCAFEE: Okay.
13 JUDGE BIRO: I'm sure. I'm sure Mr. Bieri
14 can handle it. Let's go.
15 BY MR. MCAFEE:
16 Q All right. We're at -- on AX-31, Appendix
17 B, page 3, and can -- well, let's see. Sorry. Can
18 you see a date on that?
19 A Yes. It says image date C, 1950.
20 Q Okay. And I'll move down here. Did you
21 review this photo?
22 A Yes, I did.
23 Q And were you able to review it in a,
24 a electronic version?
25 A No, just the electronic version of this

1 print.
2 Q Oh, okay. So, you zoomed on the print?
3 A Correct.
4 Q It -- or however -- whatever you did with
5 it.
6 A Yes, yes.
7 Q Okay. What do you see here?
8 A Well, this one is interesting because the
9 1930s aerial of this area was a little cloudy. It
10 wasn't real clear, particularly in the lower portion
11 of the drainage way, and here, you know, some 20-some
12 years later, it's a bit clearer. And -- but like the
13 1930s, there's no real expression of where the
14 runoff's going once it comes down the steeper areas to
15 the north and west. And it's -- and you wonder why.
16 I mean, in my opinion and based on my
17 experience, it's likely that over time the
18 installation of the roadway, the farming practices
19 going on in the area have increased flow over the
20 years, both in the upper and lower portion of the
21 drainage. But at this point in time there's just not
22 a lot of water making it to the lower portion. It's
23 either infiltrating, or again, as it loses that
24 velocity and depth component, it's simply sheet
25 flowing out over the field because there's no trace of

1 a flow path or, or a any sort of drainage way.
 2 Q Okay. Now, I'm going to put on the screen
 3 Respondent's Exhibit 5, page three, and is there a
 4 date on that, Mr. Hentges?
 5 A 1960.
 6 Q Okay. I'll move it up, so we can see the
 7 number. All right. And is it -- what's your
 8 understanding of where this photo -- how -- I'll
 9 rephrase that question. What's your understanding of
 10 where this photo was obtained?
 11 A I saw this photo initially on the Iowa State
 12 website.
 13 Q Was it also provided to us by the Agency?
 14 A It was.
 15 Q And then, what -- was it in the form of a
 16 Power Point or --
 17 A It's in the form of a digital computer file.
 18 Q Okay. Tell us about what you see in this
 19 photo.
 20 A Well, here, 10 years after the last one, it
 21 does look like there's some erosion and the drainage
 22 way's beginning to take shape. And there's even some
 23 woody vegetation on the most southern part near Deep
 24 Creek. Right, but it also tells me, again, while
 25 there's some meandering and erosion is going on in the

1 upper portions, that the higher elevations to the
 2 north and west on the site, it's still very linear,
 3 and, you know, lacks depth and velocity in the, in the
 4 lower portion near Deep Creek.
 5 Q Okay. Now, if we move to 1970 and 1980, I
 6 guess the goal here, at least I have, is try and give
 7 as much background, and not just focus on the later
 8 years. But here, this one, RX-5, page four, which is
 9 dated -- at least shows 1970, can you tell much from
 10 this photo?
 11 A No. The, the, the, the woody vegetation
 12 masks everything that you could tell about a --
 13 Q And again, is it your understanding the
 14 source of this photo is a Power Point from the Agency?
 15 A Yes.
 16 Q Then we go to 1980. And this is RX-5, page
 17 five of 27. What can you tell from that photo?
 18 A Again, there's not a lot you can tell about
 19 the flow paths or the drainage way, in part due to the
 20 woody vegetation and the non-woody vegetation, you
 21 know, growing along that area.
 22 Q Okay. Thank you. Now let's turn to a
 23 series of photos that I think have received a lot of
 24 attention the last day or so, and that's in AX-10, and
 25 those are pictometry photos, as I understand -- if I'm

1 using the right term there -- from March 20 of 2015,
 2 and there are -- I'll put them up and have you go
 3 through them with us.
 4 Okay. The first one is AX-10, page 16.
 5 First of all, you -- Mr. Hentges, you heard the
 6 testimony of Mr. Stokley about what pictometry is. Do
 7 you have anything to add to that?
 8 A No, just that the, the, the aspect of the
 9 type of photo that's collected at an angle, you know,
 10 results in a variable scale. So, it's important to
 11 keep that in mind when you're viewing it.
 12 Q Okay. Do you want to see all four of them
 13 and then come back to any particular one before you
 14 give your testimony?
 15 A Sure. That'd be fine.
 16 Q Excuse me. Okay. That was page 16. Here's
 17 page 17 of AX-10, same date; and then page 18, same
 18 date, March 20, 2015, different angle; and page 19,
 19 different angle, okay?
 20 A Yes.
 21 Q Now, I can go back through these, but --
 22 well, let's stick with this one, unless you want to
 23 see a different one.
 24 A No. This one's good.
 25 Q Okay.

1 A And the reason is, is you can see a flow
 2 path on all of these photos, indicating that, you
 3 know, a runoff event is in the process or recently
 4 occurred and so it appears there's water. I'm not
 5 sure why it's -- why -- if that's a reflection, or if
 6 it's a -- you know, represents snow, which real --
 7 really wouldn't jive with the other angles, but in all
 8 of the photos there's no real indication there's a
 9 channel present in the lower portion of the drainage
 10 way. Although in this one, near the upper center
 11 portion of the aerial photograph where the drainage
 12 way flows into Deep Creek, there are a few traces,
 13 shadows that could indicate there's some channel
 14 forming in that area. And that would be expected
 15 because the -- when I was at the site, I noted that
 16 the area of the field elevation-wise is about three to
 17 five-foot higher than the -- what appear to be the
 18 typical flow of Deep Creek.
 19 So, again, as that water reaches that point,
 20 has the velocity, it would cut down and erode near the
 21 creek. But back through the major portion of the
 22 drainage way, you know, there's no indication that
 23 from the aerial that, that, that a defined bed and
 24 bank or ordinary high-water mark exists.
 25 Q Okay. Thank you.

1 Well, let me back up a second. In your
2 experience out in the field is it common for a grass
3 waterway, grass drainage way to -- as it -- you've
4 just testified when it gets near a creek, at least
5 here there's a drop going down to the creek. Is it
6 common to have a channel form there?

7 MR. BIERI: Object to the form as leading,
8 Your Honor.

9 JUDGE BIRO: Overruled. Go ahead.

10 THE WITNESS: It's certainly not uncommon.
11 If the -- if there's enough water, indeed, the change
12 in elevation and the increase flow of depth will cause
13 cutting.

14 BY MR. MCAFEE:

15 Q Okay. Mr. Hentges, we haven't reviewed
16 every photo that's been reviewed in this courtroom
17 during this proceeding, at least, you and I here
18 today, but have we reviewed what you would consider a
19 representative sample?

20 A Yes.

21 Q And if there's any you would like -- and I'm
22 sure counsel for the Agency may have you look at
23 others, and that's fine.

24 What is your conclusion based on your entire
25 review prior to this proceeding and what we've looked

1 at today on these photos in the question of a
2 jurisdictional water?

3 MR. BIERI: Judge, I just want to object to
4 the extent if he's going to provide a legal conclusion
5 as to whether this water is jurisdictional. Thank
6 you.

7 JUDGE BIRO: Sustained.

8 BY MR. MCAFEE:

9 Q If -- go ahead. Thank you.

10 A Well -- and, and, and in my business we
11 constantly tell our clients, you know, we can't make a
12 determination as to whether an aquatic feature is
13 jurisdictional under the Clean Water Act. That that's
14 always the job of the Court to review what we've done
15 and then make that determination. But I think as far
16 as everything I've looked at all put together -- you
17 know, topography, aerial photographs -- it's apparent
18 to me that it's the fluvial mechanics of the situation
19 that, that cause erosional feature in the higher
20 elevations. And that the lower portion is simply
21 vegetated drainage way. I have no doubt that a
22 certain storm of a, of a high runoff volume could cut
23 channels in the lower portion.

24 It's also apparent in the information
25 that -- and the physical layout of the site that those

1 channels are filled with sediment and taken away by
2 nature. So, whatever's created through certain runoff
3 events or by channeling overtime has always been taken
4 away, filled in, and the flow path changed.

5 So, but, but, but it points to a bigger
6 problem, and that's that people often try to make
7 these determinations based on aerial photographs and
8 topographic maps, when, in fact, the only way to
9 document a defined channel bank, defined channel bed,
10 and ordinary high-water mark is through a site visit
11 to observe it.

12 Q How could that have been done here when the
13 -- when it had been disturbed? You weren't able to do
14 that, right?

15 A No, that's correct. The standard procedure
16 listed in the federal guidance is to go to a reference
17 site. That would be a site with similar soils,
18 similar topography, a similar type of, of drainage,
19 and observe these characteristics firsthand at those
20 sites -- site or sites. And then, make a -- you know,
21 from, from that information you can make a reasonable
22 determination, that that's what this site looked like
23 before it was disturbed. So, reference sites are the
24 standard listed in the Corps of Engineers guidance and
25 FSA wetland method guidance that you would do if

1 you're trying to evaluate a site that's been
2 disturbed.

3 Q Was that done in this case?

4 A I don't see any evidence in the file that it
5 was.

6 Q In fact, let's go to AX-31, page five, which
7 is Mr. Stokely's report. You see a paragraph there,
8 paragraph D?

9 A Yes.

10 Q And what's the heading on that paragraph?

11 A Similar tributaries.

12 Q And tell me what that paragraph discusses.

13 A Well, it, it just indicates that there are a
14 multitude of similar size, first-order tributaries in
15 the English River System, and that, you know, there's
16 more than 521 similar to the one that we're
17 discussing. And figure 11 shows a map of those
18 relative to the site.

19 Q As you've mentioned figure 11, I have placed
20 that on the screen, AX-31, page 21. Is that what
21 you're referring to?

22 A Yes. So, it appears to me that there were
23 several similar-sized drainage ways in the area of
24 this site that could have been evaluated and then used
25 to make reasonable interpretation of, of what was

1 disturbed at Mr. Morrow's site.
 2 Q And as you were testifying previously -- I
 3 was getting an exhibit here, so if I miss something, I
 4 apologize -- but you referred to a Corps -- an Army
 5 Corps of Engineers Guidance?
 6 Q Yeah. The 1987 Army Corps of Engineers
 7 Wetland Delineation Manual also discusses waters of
 8 the U.S. But in general, I mean, there's water in the
 9 U.S. including wetlands. So, the reference site is --
 10 and the procedures for using it are listed in that
 11 manual.
 12 A And again, I don't mean to have you repeat
 13 your testimony, but I want to make sure I'm clear
 14 anyway, that your testimony is that that is what the
 15 Army Corps of Representatives in this case should have
 16 done?
 17 MR. BIERI: I'm going to object to the form
 18 as leading.
 19 JUDGE BIRO: Sustained.
 20 MR. MCAFEE: I'll rephrase it.
 21 BY MR. MCAFEE:
 22 Q What did the Army Corps of Engineers do in
 23 this case?
 24 A It appears to me, from reviewing the record,
 25 that they just accepted the NRCS wetland

1 determination. On, on farmed ground the NRCS is
 2 normally the regulatory authority that would do a
 3 wetland or water the U.S. determination. They often
 4 refer to the Corps when it's a stream (phonetic). But
 5 it's also listed in the FSA manual under -- I believe
 6 under 40 CFR, Section 12, that if an area is
 7 disturbed, then a reference site should be used. And
 8 it -- I believe it references the Corps of Engineer
 9 manual.
 10 Q You just mentioned wetlands. And that's
 11 been a topic of quite of bit of discussion in this
 12 case. You have a section in your report on that, I
 13 believe, but let's go to AX-27, page 1. Tell me what
 14 that is. Whoops. There's the reference to it.
 15 A Right. That's the - that's a download off
 16 the United States Department of Agriculture web soil
 17 survey website. And it shows the -- a portion of the
 18 Morrow property and specifically the, the upper
 19 erosional feature, as well as the lower drainageway.
 20 The actual date of the photo isn't listed on these,
 21 but it, it appears to be -- after the drainage way was
 22 disturbed.
 23 Q What does this -- what is the purpose of
 24 this exhibit, as you understand it?
 25 A This exhibit would label the soil types in

1 the area. And those are -- the boundaries between
 2 them are the orange lines. Obviously, the area being
 3 evaluated is between the yellow lines and those small
 4 numbers indicate the soil type.
 5 Q And why is the soil type important?
 6 A Well, for wetlands, the, the soil needs to
 7 be hydric. And hydric soil is one of the three
 8 criteria for wetlands. The other two are hydrology
 9 and vegetation.
 10 Q Okay. And what is your analysis of this
 11 exhibit on hydra --hydric soils?
 12 A Well, when, when I look this up, the upper
 13 portion of the drainage way was labeled, like, a 5B or
 14 a 5C, and it was the soil type Ackworth-Colo
 15 (phonetic). And the lower portion was labeled 220,
 16 which is Nodaway soil.
 17 Q I'll turn it over to page two of AX-27. Is
 18 that what you -- do you need to see that?
 19 A Yes. The Ackmore-Colo was 5B, and the --
 20 that's the upper portion of the drainage. The Nodaway
 21 so lome (phonetic) is the 220. That's the lower
 22 portion, and when I looked this up, there was another
 23 column, which indicated hydric status, so if you look
 24 at the rows for 5B Ackmore-Colo, where it said hydric
 25 status, that was marked no.

1 In Iowa County, the Ackmore-Colo complex is
 2 not a hydric soil. But if you go down a row, it shows
 3 that the Colo and the Colo frequently flooded soils,
 4 which are inclusions inside this broad soil complex do
 5 have hydric criteria, and on the table I downloaded,
 6 where it said hydric status, both those were marked
 7 yes, and the very same situation existed with the
 8 Nodaway 220. Under hydric status it was marked no,
 9 yet the Quiver and the Colo occasionally flooded.
 10 Inclusions were marked yes. And then these same
 11 hydric criteria were given for those components, those
 12 inclusions that are marked yes on the table I
 13 downloaded.
 14 So, and in talking to the -- to my senior
 15 delineators that do this work every day, they said
 16 yeah, that's, you know, over in the part of the state
 17 the Nodaway's not hydric, but it can have these
 18 inclusions, and the inclusions often occur along
 19 drainage ways and in flood plains in low areas, but
 20 the general information downloaded from the NRCS site
 21 indicates that, in a blanket way, these soils are not
 22 hydric. They have to have the inclusions present, and
 23 my experience with these inclusions -- now, I haven't
 24 run across the Quiver that I recall, but the Colo we
 25 see all the time -- and in a drainage way like this,

1 they would be present because, you know, they're
2 forming in wet spots, low areas, areas that are
3 frequently flooded, but they wouldn't be continuous.
4 They would be broken up and they would be a tenth of
5 an acre of a wetland here or a couple hundredths over
6 there. And, and they would -- they do not normally
7 line the whole drainage way.

8 So, in, in my opinion, in, in, in a broad,
9 direct sense, those soils aren't hydric. And it would
10 have taken more investigation, more specific
11 investigation to determine where they were located or
12 if they existed at all.

13 MR. MCAFEE: I don't have any further
14 questions at this time, Your Honor.

15 JUDGE BIRO: Okay. Thank you.

16 MR. BIERI: May we take a short break, so I
17 can use the restroom?

18 JUDGE BIRO: Sure.

19 MR. BIERI: Thank you.

20 JUDGE BIRO: Why don't we stand in recess
21 till 10:30?

22 MR. BIERI: Sounds good. Thank you.

23 (Whereupon, a short recess was taken.)

24 MR. MCAFEE: Is it okay if I leave that
25 there, Britt?

1 Q Eighty and 100 hours you say?

2 A Yes.

3 Q And how much are you charging per hour for
4 your services?

5 A Well, Terracon sets my, my billing rate, but
6 it's \$150 an hour.

7 Q Okay. And how much have you billed -- who's
8 paying that bill? Sorry.

9 A I, I have a contract and bill in Mr.
10 McAfee's law firm.

11 Q Okay. And is that a contract specific for
12 this case or kind of a standing contract?

13 A It's both. We have a master services
14 agreement and we have a specific task order for
15 individual projects.

16 Q All right. What did Mr. McAfee tell you
17 about the matter late in 2017?

18 A Well, like I said, it was either late in
19 2017 or early in 2018, but he indicated that he had a
20 client that did some work on some drainage ways and he
21 was likely going to end up in court relative to that.

22 Q Okay. And where did that discussion take
23 place?

24 A It was a phone conversation.

25 Q All right. And that was late in 2017, then?

1 MR. BIERI: Thank you. Thanks.

2 JUDGE BIRO: Mr. Bieri, please proceed.

3 MR. BIERI: Thank you, Judge.

4 CROSS-EXAMINATION

5 BY MR. BIERI:

6 Q Good morning, Mr. Hentges. How are you?

7 A Very good. Thank you.

8 Q We've not met before, but I'm Britt Bieri,
9 on behalf of EPA on this matter.

10 When were you first hired or engaged on this
11 matter?

12 A Oh, I, I believe that I discussed it with
13 Mr. McAfee late in 2017 or early in 2018. And then I
14 would have been engaged around February of 2018.

15 Q You and Mr. McAfee are friends, correct?

16 A Yes.

17 Q You guys see each other socially?

18 A No.

19 Q Okay. Just professionally?

20 A Correct.

21 Q All right. Excluding your time yesterday
22 when you were in the courtroom, how much time have you
23 spent on this matter?

24 A Oh, I suppose somewhere between 80 and 100
25 hours.

1 What was your next engagement in this matter?

2 A Well, I believe it would have been executing
3 the documents necessary to complete a contract and
4 then required for me to open a project number and
5 begin to work on the case.

6 Q And --

7 A We then talked very soon after that about a
8 site visit.

9 Q Okay. And when was -- when were you
10 executing the documents you said? About what
11 timeframe are we talking about?

12 A I would say February 2018.

13 Q Okay. And at the time when you were engaged
14 to work on this matter, what documents had you
15 reviewed?

16 A You know, he had sent me some -- well, he
17 had sent me the complaint that was filed.

18 Q Okay.

19 A And then, I proceeded to look up the
20 historical aerial history on the Iowa State website.

21 Q Right, but you looked up the historical
22 imagery on the Iowa State website after you already
23 agreed to serve as an expert, correct?

24 A Correct.

25 Q Okay. You testified on direct that you've

1 worked on dozens of litigation matters; is that right?
 2 A I believe I said approximately two dozen.
 3 Q Okay. And were all of those as an expert
 4 witness, I assume?
 5 A Yes, they were, sir.
 6 Q All right. Your CV says you, you've
 7 performed expert witness services on 10 litigation
 8 matters.
 9 A Yes. The CV's not up-to-date. It's -- I
 10 haven't counted the number of expert witness projects
 11 I've done lately, but it's -- in anticipation of that
 12 question, it's a couple dozen.
 13 Q A couple? Like 25-ish? Something like
 14 that?
 15 A Yeah. Twenty-four-ish.
 16 Q Okay. And how many of those have been with
 17 Mr. McAfee?
 18 A I would say probably seven to nine.
 19 Q Okay. Seven to nine of them? And were some
 20 of those involving livestock facilities, I assume?
 21 A Yes. Some were.
 22 Q Okay. Any of those cases involve Clean
 23 Water Act 404 issues?
 24 A Yes. Some have.
 25 Q All right. Which case or cases was that?

1 A We've done two or three appeals of NRCS
 2 determinations and we did one cattle lot that
 3 concerned discharge to the water in the U.S.
 4 Q Okay.
 5 A And I may -- that's just all I'm remembering
 6 off the top of my head.
 7 Q That's fine. I don't expect you to remember
 8 everything. Can you think of anything else?
 9 A Well, there have been some, some -- and this
 10 is somewhat Water of the U.S. related -- generally,
 11 water being dammed or released by a neighboring
 12 landowner. So, someone causing flooding or taking
 13 water away, and, of course, those were Waters of the
 14 U.S.
 15 Q Okay. Have you ever testified in a 404
 16 case, like an administrative hearing, like we're here
 17 today?
 18 A You know, if I have I can't recall it
 19 specifically.
 20 Q Okay. All right. Are you a lawyer?
 21 A No, sir.
 22 Q Do you have any legal training?
 23 A No, sir.
 24 Q All right. And you're not an expert
 25 interpreting the Clean Water Act, are you?

1 A Well, I mean, I'm asked to a lot and I, I, I
 2 like to refer my clients to their lawyer when they do
 3 that.
 4 Q Okay.
 5 A But certainly, as a consultant, if there's
 6 rules, we're often asked of what our opinion would be
 7 and how that would go for them and the proper answer
 8 is to legally check with your attorney. But, you
 9 know, we often do -- say, if a legal interpretation is
 10 this, then you'll have these requirements. If it's
 11 that, then you'll have those requirements.
 12 Q And I guess what I'm getting at, is you've
 13 never been retained as an expert on legal
 14 interpretations, have you?
 15 A No.
 16 Q Okay. And I think you said on direct that
 17 you don't make jurisdictional determinations on behalf
 18 of your clients, is that right?
 19 A That's correct.
 20 Q Okay. For a wetland, you might make an
 21 assessment, but then you would ask NRCS or the Corps
 22 to do a determination --
 23 A That's correct.
 24 Q -- see if they agree -- to see if they
 25 agreed with you?

1 A Yes, sir.
 2 Q All right. Would you ever advise any of
 3 your private clients to fill in what may be a stream
 4 or a tributary or a wetland before talking to the
 5 appropriate government agency?
 6 A No, I would not.
 7 Q Have you ever been retained as an expert for
 8 the purposes -- in court -- for the purposes of
 9 testifying as to whether a water body is a
 10 jurisdictional wetland?
 11 A Not specifically for that reason, but it's,
 12 it's come up. I, I know I've been asked before if, in
 13 my opinion, a certain aquatic feature was
 14 jurisdictional.
 15 Q Okay. In what kind of instances has that
 16 come up?
 17 A Well, it's, it's, it's come up in property
 18 disputes over the damming up of water to create a
 19 recreational feature that impacted a downgraded
 20 property owner.
 21 Q Are those, like, hearings or before
 22 tribunals or judges or what?
 23 A It, it's, it's been court hearings or
 24 depositions or, or administrative hearings.
 25 Q Okay. You said on direct that you have no

1 training in the interpretation of aerial imagery,
 2 correct?
 3 A That's correct.
 4 Q All right. And you don't have any -- you
 5 didn't take any courses in college that informed or,
 6 or, or makes you an expert in interpreting aerial
 7 imagery, correct?
 8 A Well, that's not correct. I -- in forestry
 9 we use stereographs to look at aerial imagery, and it
 10 -- with stereograph you look at two pictures of the
 11 same thing through a mechanism that shows depth. And
 12 in forestry I did quite a bit of that. The emphasis
 13 was: what are the components of logging an area, how
 14 high are these trees, what's the diameter of them, and
 15 we made assessments on that. So, I guess I thought of
 16 that the other day and - yesterday and -- but I have
 17 not had any formal training, other than that academic
 18 experience.
 19 Q Okay. And you don't take continuing
 20 education on aerial interpretation, do you?
 21 A No.
 22 Q And you've never taught any classes or given
 23 any seminars on aerial interpretation, correct?
 24 A We've had some in-house meetings about it
 25 that I conducted.

1 Q Okay. And your CV mentions nothing of
 2 aerial interpretation, GIS, anything like that, am, am
 3 I correct?
 4 A That's correct.
 5 Q And so I'm correct to state that you don't
 6 hold yourself out as an expert in aerial photography
 7 interpretation, do you?
 8 A Not formally, but I, I've certainly done a
 9 lot of it.
 10 Q Okay. You've looked at a lot of aerial
 11 photographs, haven't you?
 12 A That's correct.
 13 Q That, that other people have presented to
 14 you?
 15 A That's correct.
 16 Q Okay. And --
 17 A And then I've had to evaluate their
 18 interpretation of those photographs.
 19 Q Well, and in this case I was curious, you
 20 know, the -- in these types of cases we do pre-hearing
 21 exchanges to help inform each side, you know, what we
 22 plan to -- what the witnesses plan to talk about. And
 23 have you, have you read what you were expected to
 24 testify about in Respondent's initial pre-hearing
 25 exchange?

1 A Yes, I believe so, if you're referring to
 2 the opinion I wrote.
 3 Q No, not, not the opinion you wrote. It's a
 4 document that's filed in the court.
 5 A Yeah, I, I, I seem to remember receiving
 6 that. I'm not sure I read it or remember everything
 7 it says.
 8 Q Okay. This is the first time you've ever
 9 testified under oath, where you're interpreting aerial
 10 images, right?
 11 A No. I mean, I, I interpreted some aerial
 12 images in a case where a neighbor had built a crossing
 13 and dammed up water on an adjacent property owner.
 14 Q And is that --
 15 A I --
 16 Q -- one of the 24 cases you were talking
 17 about -- litigation matters?
 18 A Yes, and I've testified regarding aerial
 19 photographs of well and protection areas, showing land
 20 use and, and, and several others. So, aerial
 21 photography comes into my work a lot.
 22 Q And I guess my point is, is this the first
 23 time you've ever been asked to interpret historical
 24 aerial imagery in a 404 case -- litigation matter?
 25 A It, it may well be.

1 Q Okay. Thank you. And I noticed your, your
 2 pre-hearing exchange says nothing of you interpreting
 3 aerial imagery. Were you planning on interpreting
 4 aerial imagery when you first met with Mr. McAfee?
 5 A I -- no. I assumed yes, that I would be
 6 looking at the features on Mr. Morrow's property over
 7 time. And, in fact, it's one of the first things I
 8 did.
 9 Q And tell me a little bit about how you
 10 viewed this aerial imagery. And the reason I ask is
 11 your report doesn't mention of you using ArcGIS,
 12 Google Earth, or anything of that nature. How did you
 13 view these images?
 14 A Well, I viewed the images on my computer
 15 over the internet. And, and at that point in time and
 16 at the time I wrote my opinion, I'd not yet received
 17 the complainant's expert's report.
 18 Q Sure, but you -- before that time you had
 19 been provided with all of the images, other than what
 20 were in Mr. Stokely's report, correct?
 21 A Correct.
 22 Q All right. And so, when did you first view
 23 the images that you say you looked at online?
 24 A It was before I visited the site, so I would
 25 say, like, in March of 2018.

1 Q Okay. And do you have a record or log of
 2 what images you viewed?
 3 A You know, I, I made a list of them, but
 4 essentially, I viewed everything that was available.
 5 Q From what -- from what --
 6 A From the website.
 7 Q Excuse me. From what website?
 8 A The Iowa State website.
 9 Q Okay. So, you looked at the Iowa State
 10 website. Did you look at any other sources to acquire
 11 images?
 12 A Only what was provided by the complainant.
 13 Q Okay. And so, if there was information that
 14 was provided by sources other than Iowa State, you
 15 wouldn't have looked at those online, correct?
 16 A Excuse me. I apologize. I also looked at
 17 some Google images. Those are readily available on
 18 the Internet.
 19 Q Fair enough.
 20 A But no, other than that, no.
 21 Q Okay. Like, the pictometry images that
 22 we've looked at, you did not look at those online,
 23 correct?
 24 A No.
 25 Q All right. And the digital globe pictures

1 you did not look at online, did you?
 2 A No, I did not.
 3 Q All right. Do you know how to use ArcGIS? AI
 4 do.
 5 Q Did you use that in this case?
 6 A No, I did not. And I don't use it myself
 7 routinely. It's not on my computer. We have ArcGIS
 8 experts in our office that have that software and, and
 9 look up what I need to see.
 10 Q Okay. So, approximately how many images
 11 would you have looked at on the Iowa State website?
 12 A Oh, I'm, I'm estimating 15.
 13 Q Okay. Again, I have to ask this because I'm
 14 a lawyer. Did you use any other mapping or GIS
 15 software other than ArcGIS? Not that you used ArcGIS,
 16 but other than that, did you use any?
 17 A No, except that on the Iowa State website
 18 you can also look at topographic maps, and I did look
 19 at that, but it was not aerial photography. It was
 20 topographic --
 21 Q How come you didn't include any of that work
 22 in your report if you did it well before your report?
 23 A Well, my report, you know, essentially
 24 focused on the items listed in the complaint. And
 25 that the detail of going through the contour maps and

1 the aerial photograph seemed unnecessary because it
 2 was -- it appeared most of it was being provided as
 3 exhibits on the complainant's side.
 4 Q So, had you looked -- let me strike that.
 5 You would agree the majority of the testimony you've
 6 given today did not appear in your report, correct?
 7 A Well, I'm not sure I would. I think that
 8 certainly, in my report I didn't go through each and
 9 every photograph, particularly those that I received
 10 after I wrote my report. But I think the basis of my
 11 opinion was that it doesn't appear this erosional
 12 feature and vegetated drainage way are Water of the
 13 U.S. And that was based on a multitude of things.
 14 Q And just so we're clear, before you wrote
 15 your report you had every agency exhibit with the
 16 exception of Mr. Stokely's report, is that right?
 17 A I believe so. There was some pre-hearing
 18 exchange items that came later, such as some
 19 statements by Mr. Morrow. I, I, I believe everything
 20 except that.
 21 Q All right. You certainly had AX-10, that
 22 has 22 photographs, before you wrote your report,
 23 correct?
 24 A Correct.
 25 Q All right. Did you download any of the

1 images that you say you looked at from the Iowa State
 2 website?
 3 A Yes.
 4 Q All right. But you didn't produce or
 5 reproduce any of those in your report, did you?
 6 A No. I don't think I ever printed them out.
 7 Q Okay. How did you prepare for today's
 8 testimony?
 9 A Well, I, I essentially read my opinion,
 10 looked at the information in my file page by page,
 11 which would be, you know, mostly the, the -- these
 12 documents here that you submitted to Mr. McAfee and
 13 the list of things that, that the RX exhibits. So, I
 14 just looked at all that to prepare.
 15 Q All right. And when did you start
 16 preparing?
 17 A It was about a week and a half ago because I
 18 was on vacation last week, although while I was on
 19 vacation I did take a geomorphological textbook with
 20 me and, and read up on some stream forming theory --
 21 Q Okay. And --
 22 A -- and physics.
 23 Q Excuse me. Didn't mean to interrupt you.
 24 A No. I came out with that. I said physics.
 25 Q Sorry. And then last night did you meet

1 with counsel opposite to discuss your testimony?
 2 A Yes.
 3 Q All right. How long did you guys meet?
 4 A Oh, I suppose it was about an hour and a
 5 half.
 6 Q All right. And did you guys go over photo
 7 by photo what was going to be shown to you?
 8 A No. We discussed whether we should go
 9 through all the photos. I had some notes on
 10 everything in AX-10 and AX-26. And we essentially
 11 decided that, you know, going -- since they had been
 12 poured over already, going through all of them was
 13 probably redundant and time consuming.
 14 Q What -- did you guys practice questions or
 15 anything like that?
 16 A No.
 17 Q Under the Rapanos case, have you read that
 18 case?
 19 A I've read summaries of it, and I believe
 20 some time ago when it first came out I read the --
 21 some things in the federal register about it.
 22 Q Okay. And do, do you know what the two
 23 tests are for determining jurisdiction under the Clean
 24 Water Act as outlined in Rapanos?
 25 A I know that connectivity and significant

1 nexus are, are included in there.
 2 Q Do you know anything else about the tests?
 3 A Those specific tests, I mean, they're,
 4 they're completed by the Corps in most of the projects
 5 I work for.
 6 Q Sure. And I guess can -- there's two tests.
 7 There's Scalia and Kennedy. Can you summarize either
 8 of those?
 9 A Not anymore, no.
 10 Q Okay. And can you tell us what the
 11 difference is between those two tests?
 12 A Kennedy was of the opinion that the Court
 13 Corps should have a wider hand in determining what's
 14 jurisdictional. And Justice Scalia felt that there
 15 had -- it had to be more specific relative to things
 16 being connected or a connection with a significant
 17 point where a Water of the U.S. could be determined to
 18 be adjacent for things, like a wetland could be
 19 considered jurisdictional because they were in the
 20 flood plain, or, you know, perhaps it was a channel
 21 connecting them, or maybe even a culvert, as long as
 22 there was a connection.
 23 Q A physical connection?
 24 A Yes.
 25 Q All right. You used the term "significant

1 nexus." And the reason I'm asking you about all these
 2 questions is your report, your -- and I'll show this
 3 to you, but your report appears to make some legal
 4 conclusions. And so, I just want to kind of talk to
 5 you about your background on this. What do you mean
 6 by "significant nexus"?
 7 A That there's a physical connection between
 8 the component under question and a navigable water of
 9 the U.S.
 10 Q Okay. And anything else on what you believe
 11 significant nexus is, or are you leaving anything out?
 12 Sorry.
 13 A I may well be. I mean, I, I gave talks on
 14 this to clients and peers years ago. But I mean, I
 15 haven't looked at it in a while. I think it's a --
 16 Q Okay. Safe to say you didn't consult the
 17 Rapanos case or guidance when you were writing your
 18 report?
 19 A I looked up a few things because -- but no,
 20 I did not.
 21 Q Okay. Have you read any guidance on Rapanos
 22 published by EPA?
 23 A Yes.
 24 Q All right. When's the last time you looked
 25 at that?

1 A Oh, probably a couple years ago.
 2 Q All right. And you talked about I think the
 3 NRCS manual on wetland determination.
 4 A Yes.
 5 Q When's the last time you looked at that?
 6 Strike that. Have you looked at that?
 7 A Yes. Yes.
 8 Q All right.
 9 A The last time I looked at it I read it cover
 10 to cover. That would have been fall 2017 for a court
 11 case in Nebraska.
 12 Q All right. Now, I was kind of curious to
 13 hear you talk about wetlands today. Do you remember
 14 mentioning the term "wetlands" in your report?
 15 A Not specifically, but, you know, the
 16 definition is Waters of the U.S., including wetlands.
 17 So, wetlands are Water of the U.S.
 18 Q Okay.
 19 A So, when you mention Water of the U.S., just
 20 by definition you're talking wetlands, ponds, streams,
 21 rivers, lakes.
 22 Q And to be clear, you do mention wetlands
 23 once and we're going to talk about that.
 24 A Sure.
 25 Q I thought I heard Mr. McAfee say there was a

1 section on Wetlands and I was just making sure I
2 didn't miss that in your report. You did not mention
3 -- there was a discussion between you and Mr. McAfee
4 on hydric soils and kind of analysis of the soil types
5 that lead to your conclusion that -- let me strike
6 that. Is your conclusion that this entire area along
7 this tributary is not a wetland?

8 A It's my conclusion that it hasn't been
9 determined whether it is a wetland or not.

10 Q Okay. But you said there were some hydric
11 soils, pockets of soils within that, that you believe
12 would be wetlands?

13 A I said that typically, based on my
14 experience, that in these soil complexes there would
15 be inclusions that would be hydric.

16 Q All right.

17 A It would still need a couple of other
18 criteria to be a wetland. But I think I went as far
19 as saying it's certainly possible, given it was a
20 drainage way and based on my experience in our
21 delineations of drainage ways, that there are often
22 zones along them that have the three criteria.

23 Q And do you know that wetland's determination
24 was appealed at a local level?

25 A Yes, I saw the paperwork on that.

1 Q But were -- you weren't involved in that?

2 A No.

3 Q Okay. And so, this testimony you gave about
4 hydric soils and all that, none of that appears in
5 your report, correct?

6 A That's correct.

7 Q All right. And, in fact, the only statement
8 in your report on wetlands that I see is right here,
9 and I'm showing what's been marked as RX-1, page
10 three. And I'm going to put my pen right here --
11 nope. Sorry. Two. You mentioned it two times.
12 Excuse me.

13 This paragraph starting "based on," and then
14 this paragraph starting "the documentation listed by
15 the complainant." Can you read for me this paragraph
16 that starts with "based on," in the second paragraph
17 of RX-1, page three?

18 A "Based on existing aerial photography and
19 ground photographs of the area, it appears the
20 non-farmed areas over the current tile line likely
21 have or are developing wetland characteristics."

22 Q All right. What do you mean by the "current
23 tile line"?

24 A Oh, I mean that -- the tile line installed
25 along the drainage way.

1 Q Right. So, the tile line that -- let me
2 strike that. Do you agree that Mr. Morrow filled this
3 tributary?

4 A Well, you know, I don't want to be this way,
5 but I don't really think it was a tributary. I think
6 it was a drainage way, but I know what you're talking
7 about. And now I've forgotten what you asked me. I'm
8 sorry.

9 Q I'm sorry. Do you believe that he filled
10 this drainage way?

11 A Yes. Yes.

12 Q Okay. And the tile line that you're
13 referencing in this paragraph is the tile line that
14 essentially goes through what you call a drainage way,
15 pretty much all the way to Deep Creek?

16 A Yes, sir.

17 Q Okay. Thank you. And so, you're saying
18 here, that that area has -- likely has or is
19 developing wetland characteristics, correct?

20 A Yes. And let me clarify that a part of that
21 was based on my site visit too. You could see it
22 then.

23 Q Correct. So, you saw wetland vegetation
24 growing back there, correct?

25 A I saw what appeared to be wetland

1 vegetation. It was early in the growing season, so
2 there wasn't much, and I don't identify plants
3 anymore, but it just had the look of it, the feel of
4 it.

5 Q Yeah. Does that make you think that it
6 probably had the look and feel of it before it was
7 filled in?

8 A Well, it's hard to say. There's different
9 components now. You know, now that that tile line's
10 in, that water's in the subsurface, in the rift zone
11 even a little deeper than it was, and it's, you know,
12 it could provide a source of hydrology. But I
13 think -- my overall answer is I believe as long as
14 that area's not farmed it will eventually show
15 characteristics of a wetland.

16 Q Okay. And --

17 A As far as what it looked like before, I
18 don't know.

19 Q And when you were reviewing the aerial
20 imagery, you weren't really looking for wetland
21 issues, were you?

22 A Well, yes. The complainant stated that 1.3
23 acres of wetlands were impacted. And so -- and
24 unfortunately, my eye just always goes to that because
25 that's normally what I do is look at -- or that's a

1 lot of what I do, is look at reports that evaluate
 2 wetlands and then discuss the signatures and
 3 historical aerial photography.
 4 Q All right. But yet, the only two times you
 5 mention wetlands in your report are that you say
 6 wetlands likely have or, or are developing in the same
 7 area where NRCS, the Corps, and EPA say there
 8 wetlands. And then, the second time you say it is
 9 when you're talking about this FSA documentation; is
 10 that right?
 11 A Yes.
 12 Q Okay. In other words, your report doesn't
 13 say there, there are not wetlands, discussing hydric
 14 soils, anything like that, correct?
 15 A That's correct.
 16 Q All right. Thank you. Do you know the
 17 difference between the NRCS and Army Corps of
 18 Engineers criteria for determining wetlands?
 19 A Yes.
 20 Q All right. What are -- what's the
 21 difference?
 22 A Well, it's essentially two different methods
 23 to get at the same answer. The FSA manual doesn't
 24 require generally the type of onsite documentation
 25 that the Corps manual requires, and in particular,

1 it's because the wetlands are in control of the United
 2 States Department of Agriculture that are evaluated by
 3 NRCS may well and generally do not have two of the
 4 three characteristics. The hydrology's been
 5 manipulated by tiling. And so, it doesn't need to be
 6 present. And the vegetation's been manipulated by
 7 crop production practices. So, the NRCS are soils
 8 experts. They've mapped hydric soils, and they
 9 primarily go based on that component. If hydric
 10 soil's present, oftentimes wetlands can be present.
 11 The NRCS also, you know, does a lot of them
 12 outside the growing season, which the Corps wouldn't
 13 allow. They don't document vegetation. They often
 14 look at the soil, but they don't take down specific
 15 indicators of hydrology, and but the reason,
 16 obviously, is that they're looking at farmlands, and
 17 the Corps' looking at everything else, so I see that
 18 as the main difference.
 19 Plus, the big difference is the FSA manual
 20 requires transects and does not allow a comprehensive
 21 method, where discreet random points can be evaluated.
 22 Q Who uses the FSA manual?
 23 A The NRCS.
 24 Q Okay. And is that the '87 manual?
 25 A No. The '87 manual was the Corps. Manual.

1 Q Okay. Does the NRCS rely on that '87
 2 manual?
 3 A It's referenced several times in the FSA
 4 manual, indicating that, you know, in non-farmed areas
 5 it should be used.
 6 Q Okay. You, you weren't here for the
 7 testimony on the first day, I don't believe, but we
 8 had a Mr. Don Carrington from NRCS here. And he
 9 stated that the FSA does not do and is not authorized
 10 to do wetlands determinations. Do, do you agree with
 11 that?
 12 A Well, no, I don't because they have a form
 13 that says "Wetland Determination Form" that they
 14 complete and provide property owners, so
 15 Q It's called a Wetlands Determination Form?
 16 A Highly erodible land and wetlands -- yeah, I
 17 guess the exact name of the form I -- shouldn't quote
 18 me on. But there's one in our exhibits that they did
 19 that was a wetland determination, so
 20 Q And under what authority do you believe the
 21 FSA can do wetlands determinations because I thought
 22 you said earlier that only the NRCS could do them or
 23 the Corps.
 24 A The Corps. I said the Corps. Right. It's
 25 - my, my understanding, loosely, is that Congress gave

1 the authority for wetlands determinations to be done
 2 by the Corps of Engineers on non-farmed agricultural
 3 ground with the assistance of EPA. And that they gave
 4 the U.S. Department of Agriculture authority to do
 5 wetland regulation on farm grounds. And the arm
 6 was --that, that implemented that was the NRCS.
 7 Q Correct, and not the FSA, right?
 8 A Well, what they use is called the FSA
 9 manual, so --
 10 Q Okay.
 11 A -- if there's some confusion there, it's
 12 nomenclature.
 13 Q All right. And I'm going to show you RX-4,
 14 page one. Excuse me. Is this what you're referring
 15 to as a wetlands determination from the FSA?
 16 A No. No, and I didn't ever intend for it to
 17 be interpreted that the FSA did a wetlands
 18 delineation. Under the USDA program the NRCS does the
 19 determinations using the FSA manual.
 20 Q Okay.
 21 A So that's just the name of a guidance
 22 document.
 23 Q Okay. So does the FSA do wetlands
 24 determinations?
 25 A It looks like they did here. But no, I'm

1 not aware of them routinely doing it. But not being
2 in the farming business, I don't know a lot about FSA.
3 I know we used to go there for our slides. Their
4 office is always generally shared with the NRCS, and
5 we would get cover slides from the FSA for historical
6 aerials, but we would have to go to the NRCS to get
7 the actual determination or the hardcopy of the, of
8 the areas on a given property where wetlands existed,
9 and they didn't know what type they were, farmed
10 wetlands, non-wetlands.

11 So, to answer your question, it's, it's
12 always been generally apparent to me that the NRCS did
13 the actual determination.

14 Q Fair enough. Thank you.

15 I want to talk a little bit more about
16 wetlands, then I'm going to move on.

17 What benefits do wetlands provide? I know
18 that's a long answer. Try --

19 A Yeah.

20 Q Try to just summarize them, if you can.

21 A If I could summarize, it would be flood
22 retention, treatment in the way of sediment removal,
23 and, and chemical reduction. They provide a wildlife
24 habitat and, you know, that might be a general --

25 Q Sure. They help the ground water recharge,

1 protection of aquatic resources and describes the
2 methods that they can be modified through a permit
3 process for non-avoidable impact.

4 Q All right. I want to go through your report
5 and just ask you a few questions, if I could. Putting
6 it up on the screen. This is RX-1.

7 MR. BIERI: Can you zoom out just a hair?

8 Sorry.

9 MR. MUEHLBERGER: Sure.

10 MR. BIERI: Thank you.

11 MR. MUEHLBERGER: Is that enough?

12 MR. BIERI: Yeah. That's perfect. Thank
13 you.

14 BY MR. BIERI:

15 Q In your report, page one, paragraph three,
16 right in the middle, I'll try to point to it. You
17 state the Agency references Agency Exhibit AX-10,
18 containing historical aerial photographs showing a
19 defined bed and bank and water in the channel at
20 certain times. You agree with that statement, that
21 that's what some of the photos in AX-10 show?

22 A No, I don't.

23 Q What do you mean when you say that then?

24 A I just say the complaint references it.

25 That --

1 correct?

2 A Correct.

3 Q All right. And I've read somewhere that
4 about an acre of wetlands can hold over a million
5 gallons of water. Have you heard or believe that?

6 A Sure.

7 Q All right.

8 A You bet.

9 Q And Dr. Garcia referred to them as the
10 kidneys of the land. Would you agree with that?

11 A Yes.

12 Q Okay. I want to talk about tributaries a
13 little bit -- well, probably a lot going forward. But
14 are there benefits of tributaries?

15 A Yes.

16 Q All right. And can you describe what those
17 are?

18 A Well, they retain water in high runoff
19 periods, channel at the main waterways. They also
20 provide ground water recharge and wildlife habitat.

21 Q All right. And do you know what the purpose
22 is of Section 404, the Clean Water Act?

23 A Yes.

24 Q What is it?

25 A Well, it, it outlines regulations for the

1 Q Oh, you're saying that the complaint says
2 that?

3 A Yes.

4 Q Okay. All right. We're going to move down
5 to paragraph four. You say here' "the documentation
6 listed by the complaint shows the lower reach of the
7 unnamed intermittent tributary of Deep Creek does not
8 show all of the characteristics necessary to be
9 defined as a WOTUS, Water of the U.S., under the Clean
10 Water Act."

11 Did I read that right?

12 A Yes.

13 Q All right. And I want to make sure I'm
14 clear here. You say the lower reach. Your report
15 does not address at all the upper reach, correct?

16 A The comment was narrowing in the lower
17 reach. There -- at -- certainly, at this point in
18 time, my opinion, we'll still be informed about the
19 upper reach. I certainly believe it's an erosional
20 feature, but -- and that it has channel
21 characteristics, but it's -- in the very upper portion
22 it's more like a ravine after having seen it.

23 Q Okay. Show me on AX-10, page 18, which I've
24 put up on the screen. Can you just -- can you draw on
25 the screen where you say the lower reach starts?

1 A Well, it would be specifically where the
 2 elevation changes flatten out, but I believe it's that
 3 area there.
 4 Q Okay. And so, on the screen we are -- we're
 5 looking about maybe a centimeter, a little bit more
 6 than a centimeter to the right of that road crossing
 7 in the middle, correct?
 8 A Correct.
 9 Q All right. That's what you mean when you
 10 say the lower reach, correct?
 11 A Correct.
 12 Q All right. Is there anything in your
 13 report, sir, that addresses the upper reach of the
 14 tributary?
 15 A Not that I recall.
 16 Q Okay. Are, are you here today to dispute
 17 that the upper reaches of the tributary don't have a
 18 defined bed and bank?
 19 A No, I'm not.
 20 Q Okay. And we've seen photographs of that
 21 area, albeit a little bit above that area where
 22 multiple witnesses have testified to in ordinary
 23 high-water mark and vegetation removal. Are you here
 24 to dispute any of that in the upper reaches?
 25 A No. I saw that myself when I was on the

1 site.
 2 Q All right. What you do say is that the
 3 lower reaches are a grassed drainage way -- I'm going
 4 to clear that. I'm not intending to show that
 5 anymore. Excuse me.
 6 That the lower reaches is -- the lower reach
 7 is a grass drainage way without a defined channel.
 8 A Vegetative drainage way, yes.
 9 Q Okay. Now, I'm kind of going
 10 chronologically down in your report, and now I'm down
 11 at the bottom of the page of RX-1, which -- page one,
 12 which starts Agency Exhibit A -- AX-18?
 13 A Yes.
 14 Q All right. Do you remember what that
 15 exhibit is?
 16 A I believe it's a letter from the Corps of
 17 Engineers.
 18 Q All right. And looks like you recite that
 19 the letter from the Corps talks about the drainage way
 20 -- or you say, "the Corps interprets the aerial record
 21 to show that the 2009 -- in 2009 and 2010 that portion
 22 of the drainage way to Deep Creek that flows over the
 23 bottom grassland had no defined channel present." Did
 24 I read that right?
 25 A Yes.

1 Q All right. And when we say -- use a
 2 different term here, the bottom grassland, do you mean
 3 the lower reaches that we just talked about?
 4 A Correct. I believe that's what they called
 5 it in the Corps letter.
 6 Q Okay. And then, after you state that, you
 7 essentially just conclude that, in the absence of a
 8 defined channel, bed and bank, and ordinary high water
 9 mark, a grass drainage way that intermittently
 10 discharges water is not considered a WOTUS. And then
 11 you state that a couple different ways, correct?
 12 A Yes.
 13 Q Okay. And the Corps letter, the last
 14 analysis of the Corps letter is where you talk about
 15 2010, correct?
 16 A Yes.
 17 Q All right. And if we look at the Corps
 18 letter, AX-18, page one through three, we're looking
 19 at this paragraph right here?
 20 A Yes.
 21 Q You see that last sentence of that
 22 paragraph?
 23 A Which paragraph now?
 24 Q I'm sorry. The paragraph that begins "a
 25 study of".

1 A Yes.
 2 Q Right here.
 3 A Last --
 4 Q What does the last sentence of that
 5 paragraph say?
 6 A "In 2000 to 2010 the riparian water cover
 7 was removed from the bottom land channel, and the
 8 channel appeared to have been graded as a grass
 9 waterway again.
 10 Q Okay. So --
 11 A I'm sorry. That wasn't --
 12 Q Sorry.
 13 A That wasn't the last -- in 2011, the
 14 waterway appears to have been partially excavated into
 15 a drainage ditch. That's the last sentence. I'm
 16 sorry.
 17 Q Correct. Sorry. That sentence -- that
 18 doesn't appear in your report. The last sentence that
 19 interprets imagery after 2010, that doesn't appear in
 20 your report, correct? I can --
 21 A No, it does not.
 22 Q Okay. Why did you leave that out?
 23 A Well, we were still in the process of having
 24 meetings, and it was my understanding, in talking to
 25 Mr. McAfee, we weren't certain -- we needed to talk to

1 Mr. Morrow about any grading he may have done in that
2 area and whether that was an accurate interpretation
3 by the Corps.

4 Q Okay. But Mr. Morrow owned this property
5 starting in 2008, correct?

6 A Yes.

7 Q So you reference 2009 and 2010, where the
8 Corps kind of says this is a grass waterway, right?

9 A Yes.

10 Q But then you didn't reference the next year,
11 where they say it was graded into a ditch?

12 A Well, he said appeared, and I was trying to
13 get concurrence from the property owner as whether any
14 grading in that area had occurred or hadn't occurred.
15 It was -- it wasn't clear to me, so I didn't --

16 Q Okay.

17 A -- you know, include -- expand on it in my
18 report.

19 Q All right. I'm going to now turn to page
20 two of your report, RX-1, page two. Actually, sorry.
21 Let me go back to page one. Okay. I want to talk
22 about these last couple paragraphs. Hopefully it'll
23 focus in. We've made it this far.

24 JUDGE BIRO: There it goes.

25 MR. BIERI: All right. There we go.

1 BY MR. BIERI:

2 Q Okay. The last couple paragraphs -- I'm
3 sorry. The last couple sentences, starting in the
4 middle, I'm going to read. "In the absence of a
5 defined channel bed and bank and ordinary high-water
6 mark, a grass drainage way that intermittently
7 discharges water is not considered a WOTUS."

8 Did I read that right?

9 A Yes.

10 Q All right. What's your authority for that
11 statement?

12 A Well, it's not a legal proclamation. It's
13 my opinion.

14 Q Right. What's the legal authority for it,
15 if you --

16 A Well, there --

17 Q -- if you have any?

18 A There is no legal authority. I --

19 Q Okay.

20 A I pronounce my opinion on whether an aquatic
21 feature is a Water of the U.S. all the time.

22 Q All right.

23 A I do it all the time.

24 Q All right.

25 A And I tell my clients it doesn't mean

1 anything, what I think.

2 Q Okay.

3 A But, but yet, they ask me based on my
4 experience.

5 Q All right.

6 A So, so, what we try to do is we try to give
7 them the answer we think the Corps will give them.

8 Q Okay. And does your interpretation ever
9 differ with the Corps --

10 A Oh --

11 Q -- other than this case, obviously?

12 A Sure, it does. Sure, it does.

13 Q Okay.

14 A And, and we try to indicate to them that,
15 you know, that we have a lot of experience. We're
16 right, we're wrong. We're probably right, but it
17 doesn't matter what we say. It matters what the Corps
18 says.

19 Q All right. So, you say in the absence of a
20 defined channel, bed and bank -- if we did have a
21 defined channel bed and bank and high water mark you
22 would agree this tributary would be a WOTUS, correct?

23 A Yes. That's the definition, and --

24 Q Okay.

25 A -- it if was present and permanent.

1 Q I'm sorry? You said present and permanent?

2 A Yes.

3 Q And what do you mean by that?

4 A Well, I mean that you could go out there and
5 see it and say okay, this is Water of the U.S. and you
6 could go back and it'd be gone and then what would you
7 say? Now, it's starting to sound like an erosional
8 feature, like a drainage way and not a true channel.

9 Q Can we go back and look at what this looked
10 like before the fill?

11 A No. You'd have to look at a reference site,
12 and evidently, there's like 500 of them in the area.

13 Q Did you look at any reference sites?

14 A No, but I did eyeball that -- some of the
15 drainage ways, you know, trying to figure out how much
16 area they drained, and is that -- is there a stream
17 coming out of there. And the ones I drove past that
18 are in the area, they all looked dry. And maybe it
19 was the time of the year I was there, but I, I did not
20 get out and look close at any of them.

21 Q All right. Okay. Then move to page two,
22 and you say -- I'm going to skip the LiDAR image for a
23 second, and we'll come back to that.

24 The second paragraph you talk about AX-1, 2,
25 4, and 19, contain ground photographs and videos from

1 site visits showing the tributary upstream and
2 downstream of the area in question indicate a defined
3 channel exists. You're saying a defined channel
4 exists in the ground photos, correct?

5 Q No. I'm saying that that was the claim of
6 the text associated with exhibits AX-1 through AX-19.
7 So, so, I'm just stating that's what the complainant
8 has alleged.

9 A All right. There you call it a tributary
10 upstream and downstream. Was that just an error on
11 your part?

12 Q You know, again, I'm, I'm just kind of
13 referencing what was in the complaint, and it didn't
14 bother me much at that time, but after a couple days'
15 discussion here it does bother me to call it a
16 tributary because I don't think it's accurate.

17 Q Okay. And I'm going to show you what's been
18 marked as AX-1, page 18 of 54. This is a photograph
19 from May of this year. Do you admit that that
20 photograph shows a defined bed and bank, sir?

21 A I mean, the bed's not really clear, but it
22 does, it does look like there's a bank and perhaps a
23 bed and indication of an ordinary high-water mark.

24 Q All right. Thank you.
25 Now, on that sentence -- excuse me -- that I

1 just read to you -- the second full paragraph, you
2 talk about the area in question. Do you see that
3 there?

4 A Yes.

5 Q What's the area in question?

6 A Well, I, I would say it would be the
7 drainage way on Mr. Morrow's property, the area of the
8 photographs and videos in AX-1, AX-2, AX-4, and AX-19.

9 Q You say it shows the tributary upstream and
10 downstream of the area in question. It appears to the
11 reader that you're saying that's the lower reaches of
12 the tributary and then you're defining that by just
13 where it enters Deep Creek and then the upper reach.
14 How is there any other way to read that?

15 A Well, you've got to look at the field report
16 and the photographs and their description. Generally,
17 all that information was from the upstream end,
18 offsite and some of it onsite because that area wasn't
19 disturbed. So, the documents that I'm referencing, in
20 my opinion, were mostly based on the upstream portion
21 of the drainage way.

22 Q Then you say downstream too. What are you
23 referencing when you say downstream?

24 A Well, I mean, as it got close to the Deep
25 Creek.

1 Q All right.

2 A And, of course, well, as it got close to
3 Deep Creek.

4 Q All right. The zero-order stream -- you
5 talk about a zero-order stream. What do you mean by
6 that?

7 A Well, it's just a name for swales and
8 drainage ways that aren't actually -- you don't have
9 all the components to be called a first order stream.

10 Q All right. And are there any swales that
11 you think feed this tributary we're here discussing?

12 A I believe on Mr. Morrow's property to the
13 north there are some --

14 Q All right. What order are those, if this
15 trib, you say, is zero?

16 A Well, I mean, I guess you could call them
17 zero too. They could be gullies, ravines, other
18 erosional features.

19 Q Okay. The topographical map, I don't need
20 to bring it up here, but you testified on direct that
21 the three dots, the three blue dots. Do you remember
22 that?

23 A Yes.

24 Q Do you remember telling us that those are --
25 mean ephemeral or intermittent according to USGS?

1 A Yeah. I'm trying to remember. I think -- I
2 did say that, and what I meant was it's one or the
3 other. I think the actual blue line means
4 intermittent.

5 Q Right. The blue line with the three dots
6 means intermittent, correct?

7 A Yeah.

8 Q Not ephemeral. Is that right?

9 A Correct.

10 Q All right. And ephemeral would be something
11 that runs directly responsive to rainfall only,
12 correct?

13 A Correct.

14 Q All right. What about intermittent?

15 A Well, intermittent can run seasonally based
16 on the water table, if the water table rises, you
17 know, perhaps they'll get some base flow from ground
18 water.

19 Q All right. Moving down page two of your
20 report, RX-1, you say the landowner purchased the
21 property in March of 2008, and that the NRCS approved
22 pattern tile systems on the farmed areas north and
23 south, and that after the installation of the tiles
24 the landowner conducted drainage way maintenance on
25 selected areas of the bottom land grass drainage way

1 to promote surface flow.

2 We didn't hear anything or much, if I
3 recall, about drainage way maintenance. What are you
4 talking about there?

5 A You know, and I didn't have much to go on
6 either. I mean, as I said earlier, we were going to
7 talk to Mr. Morrow again and pin down exactly what
8 he'd done. But I thought in one of the phone
9 conversations that Mr. Morrow and I had with
10 Mr. McAfee that it was mentioned that, you know, that
11 thing would plug up all the time. It would clog up,
12 and then water would go all over the field.

13 So, at least near the road there -- or the
14 crossing, he would, you know, get in there and grade
15 the thing to drain, essentially. And Eldon even asked
16 him, so what'd you do, I mean, how deep did you cut
17 it? And as I recall, Mr. Morrow said, well, you know,
18 just a foot or two. Just basically get in there with
19 his blade and move the sediment that'd been deposited.

20 I felt likely because it wasn't protonation
21 (phonetic) of the system to have that drive-through
22 road, but, you know, and he said just -- he just went
23 a few feet, so that's what I'm talking about here.

24 Q Okay. Next in your report on RX-1, page 2,
25 you talk about RX-5 shows the U.S. EPA aerials from

1 the Iowa State University geographic information
2 system support and research facility. You were
3 speaking, I believe, of AX-10 there, even though it's
4 not referenced in your report?

5 A Yes.

6 Q And you may also be referencing, to be fair,
7 the Power Point that was provided?

8 A That's correct.

9 Q All right. And that's actually what you
10 turned around and provided to us as the exhibits that
11 were your -- the aerial images attached to your
12 report, correct?

13 A Yes.

14 Q And it looks like you added one page. At
15 the bottom you say RX-5, page 12 of 27, photographed
16 from the same database that was not included in the
17 EPA aerials, and do you know whether or not that was
18 -- excuse me -- the bottom. Do you know whether or
19 not that was actually provided to you by Mr. Stokely?

20 A You know, I don't. I know that -- and as
21 I've testified, I looked at the Iowa State database.
22 I had all those saved to a file when I compared it to
23 the Power Point, what I do remember was I don't see
24 this one in there.

25 Q Okay.

1 A Now, if it was subsequently in Mr. Stokely's
2 report I'm not sure because I didn't have his report
3 at this time.

4 Q That's fair. And I just want to make sure
5 you weren't -- were you chiding EPA for, like, trying
6 to hide a photograph or something like that?

7 A No. I just said there was one missing, but
8 I had an extra one.

9 Q Thank you. You next talk about an aerial
10 photograph from 2007, page 11 of -- you just say RX.
11 I assume you're talking about RX-5, is that right?

12 A Probably.

13 Q All right. I'm going to show you what's
14 been marked as RX-5, page 11. What are we looking at
15 here?

16 A 2007 aerial photograph from Iowa State
17 website.

18 Q All right. And do you know what the -- what
19 is the blue background?

20 A Around the --

21 Q Yeah.

22 A That's a template on the Power Point site, I
23 believe.

24 Q Okay. So, this exhibit -- this came -- this
25 image came from EPA?

1 A Yes.

2 Q Is that right? Okay. Thanks. And Exhibit
3 12, this is the -- I'm sorry. RX-5, page 12. This is
4 an aerial. It looks like it's dated August 15, 2008?

5 A Yes.

6 Q All right. And this is one you say that
7 this photo from your report says -- shows the
8 bottomland grass drainage way does not contain a
9 defined channel. And you believe that photograph
10 shows that, correct?

11 A Yes.

12 Q All right. I'm going to put your report
13 back up. Now, just so I'm clear, at the time you were
14 writing this report you had all of AX-10, which had
15 photos from the 1930s, all the way to at least 2016,
16 maybe 2018, correct?

17 A I believe I did, yes.

18 Q All right. So, and then you state -- this
19 is on your report, continuing reading, "the aerial
20 photograph in 2009 in RX-5, page 13 of 17 was
21 reproduced to a smaller scale and is shown as page
22 14." I'm going to show that to you.

23 Showing you what's been marked as RX-5, page
24 14, is that the image you're talking about?

25 A Yes.

1 Q All right. And you say, "the aerial
2 photograph from 2009 shows the bottomland grass
3 drainage way does not contain a defined channel." Did
4 I read that right? Oh, you didn't see your report,
5 but --

6 A Yes.

7 Q Okay. And that's the photograph you're
8 referencing, correct?

9 A Yes.

10 Q All right. And your report, despite having
11 all these photographs from after 2009 and testifying
12 here today that you reviewed them before you drafted
13 this report, doesn't contain any analysis of any
14 photographs after 2009, correct?

15 A I don't believe it does.

16 Q All right. And the first time we've heard
17 analysis of photographs after 2009 from you was this
18 morning, correct?

19 A I believe, yes.

20 Q All right. And so, you reviewed those
21 photos. You state you looked at them on your
22 computer. You looked at the Iowa State website, but
23 you didn't include any description or thoughts on them
24 then?

25 A Not at this time, no.

1 Q All right. And that's six years before the
2 fill, correct?

3 A Yes.

4 Q Is, is where you stopped your analysis,
5 correct?

6 A It's where I stopped talking about it in
7 this opinion, yes.

8 Q Yeah. Okay. All right. I'm going to show
9 you, sir, what's been marked as RX-3. What's the date
10 of this image?

11 A I'm not sure. There's a way to look it up
12 and I believe that Mr. Stokely looked that date up.
13 But you actually have to download Meta data to see
14 when it was collected. But so, to my recollection,
15 what Mr. Stokely said yesterday, it was, like, 2008.

16 Q Okay. You didn't know that until
17 Mr. Stokely testified yesterday, correct?

18 A No, but that's about the time it looked
19 like. It, it was obvious the drainage way was still
20 intact, so it was before March, April 2015.

21 Q All right. And do you know the resolution
22 of the LiDAR image as you viewed it, you said, on the
23 Iowa State website?

24 A One meter.

25 Q Okay. And it's your opinion that this

1 photograph shows a break in the physical connection
2 between the upper reaches of this tributary and Deep
3 Creek, correct?

4 A Yes.

5 Q All right. And that makes it not a Water of
6 the U.S.?

7 A Well, in order to be a Water of the U.S. it
8 has to have a connection.

9 Q Right, and I -- you're saying this
10 photograph, at least there's some evidence that
11 there's no physical connection, correct?

12 A Yes.

13 Q In 2008, correct?

14 A Correct.

15 Q All right. And in your report you say --
16 strike that. Sorry. And is it your opinion that if
17 -- let's just assume for the purposes of argument or
18 hypothetical that there was no physical connection in
19 2008. Let's say it was plowed through, lost physical
20 connection. Does that mean it can never be
21 jurisdictional?

22 A I don't believe it does. It would seem to
23 me that the things that allow it to become
24 jurisdictional would be natural or manmade processes,
25 but for it to become non-jurisdictional through

1 natural processes would be within the regulations.

2 Q All right. Now, this photograph -- what
3 Mr. Stokely testified to, was taken in May of 2008.
4 Do you know whether prior to that time this area in
5 the lower portion, where your little lines are drawn,
6 had been manipulated?

7 A Well, I mean, manipulated is a term you
8 would need to define, but I think I can assume it
9 means has anybody filled or graded it or, or widened
10 it, deepened it, and at that point in time my
11 understanding was that Mr. Morrow had only done minor
12 maintenance to the ditch before he did the tile line
13 section.

14 Q How many people prior to him? Do you know
15 one way or another?

16 A No, but, you know, if you look at the aerial
17 record, it kind of seems like they did, you know.
18 Riparian areas grow up, and then they disappear. Well,
19 did those trees just die, or did somebody thin them
20 out?

21 Q Sure.

22 A They were putting a fence up, so I --

23 Q Sure.

24 A -- you know.

25 Q Could physical manipulation of this lower

1 portion of the trib account for where you've drawn
2 those lines?

3 A Well, it could, yeah.

4 Q Okay. All right. I want to talk a little
5 bit about your site visit, if we could.

6 A Sure.

7 Q It was March 30 of 2018?

8 A Yes.

9 Q All right. Who was there?

10 A Mr. Morrow was there and I was there. My
11 wife was in the car by the hog lot, which she wasn't
12 too happy about, and the guy from the hog lot came out
13 to see what she was doing there --

14 Q Oh.

15 A -- which she really wasn't happy about. But
16 we were on the way to my sister's for Easter and I was
17 going up by there, so I made arrangements with Scott
18 to meet him there that day.

19 Q Okay. Was counsel there? I'm sorry I
20 was --

21 A No. No.

22 Q -- laughing at your wife's follies, but
23 okay. How long did you spend there?

24 A Oh, longer than I thought. About an hour
25 and a half.

1 Q Okay. And can you just summarize what you
2 did?

3 A I got in Scott's pickup. It was spring, so
4 I don't believe he had planted. But I remember -- and
5 that might be another site I was worried about,
6 driving over the planting -- but I don't believe he
7 had. We drove down, parked at about the toe of the
8 slope, halfway down the drainage way, then we walked
9 up to the northwest to his property line and looked at
10 that area, walked back to the truck, and then we
11 walked down to Deep Creek.

12 Q All right. Did you take any photographs?

13 A No. I had left my phone in the car.

14 Q All right. And you didn't prepare any
15 report or any notes of your visit, did you?

16 A I -- you know, I wrote down some notes, but
17 mostly, the things that I told Scott I was going to
18 do, and he had indicated to me he was going to get me
19 some letters that Marlyn Schafer had sent to him and
20 stuff. So, that stuff I wrote down, but I did not
21 take a notepad or phone with me during the --

22 Q Okay. Do you agree that prior to Mr. Morrow
23 filling this water body that nutrients and sediments
24 would flow down this water body and into Deep Creek?

25 A Yes.

1 Q All right. And he talked -- and I'm going
2 to butcher these farm terms. He talked yesterday
3 about corn silks and debris from other crops going
4 down into that waterway, is that your understanding?

5 A Yes.

6 Q All right. And all of that was happening
7 before he did the work. And he said since he's tiled
8 this, that's happened less, correct?

9 A Yes.

10 Q All right. And you state in your report
11 that the activity conducted by the landowner is
12 consistent with recommendations from water shed and
13 agricultural officials to decrease nutrients and
14 sediments reaching Iowa's waterway. Do you remember
15 saying that in your report?

16 A Yes.

17 Q All right. Who are the water shed and
18 agricultural officials that you are citing?

19 A Well, it's -- to take it in context, it's
20 more of a bigger picture thing. It'd be like
21 Dr. Haliberg from the University of Iowa and the folks
22 at the Iowa State Extension Service.

23 There's a big push right now to try and
24 figure out, you know, how to limit the size of the
25 dead zone in the Gulf of Mexico, and all the

1 environmental officials that work in agriculture and
2 environmental science in Iowa, you know, have -- are
3 looking at that. And so, if you go to the seminars or
4 the classes that the extension service puts on, there,
5 there's buffer strips and bio reactors and all sorts
6 of ideas. But everybody's searching for, you know,
7 what are the types of things you can do, and it
8 occurred to me, just, and maybe by luck, what Scott's
9 come across is not a bad idea.

10 If you tile the upland runoff --
11 particularly on areas that are CRP -- that's fairly
12 clean, down past the fields and get it out of there,
13 it doesn't have the nutrients that cause problems.
14 And it -- and then the stuff running off the field,
15 you know, is stopped by little check dams that, that
16 drop the sediment out. It still flows through,
17 percolating downward, which helps clean it up, and
18 then the sediments haul with the skid loader up to the
19 top of the field, where it can grow more crops.

20 So, what struck me was -- is, you know, this
21 might be something we need to look at because it's
22 going to be something out of the box that the farmers
23 can install. It's also going to be something that
24 helps improve their productivity. Or if it does
25 improve their productivity and their bottom line,

1 they're more likely to do it --
 2 Q And --
 3 A -- otherwise, we're all going to pay for it
 4 in a box of cornflakes.
 5 Q Sorry. I don't mean to cut you off.
 6 A Yeah. I'm sorry.
 7 Q I was --
 8 A I apologize for rambling.
 9 Q No. I -- my question was it appears you
 10 were talking about he had recommendations from
 11 specific officials, and I was just wondering if you
 12 know what those recommendations were, but it sounds
 13 like you're just saying generally, in the community,
 14 we're talking about doing this.
 15 A Right, and --
 16 Q Okay.
 17 A -- there's pressure on farmers too, to, you
 18 know, do things. What can you do, and yet, nobody's
 19 really telling them exactly what to do.
 20 Q All right. So, in the -- you say the
 21 activity conducted, but what are you saying? The
 22 activity conducted, tiling this -- what the NCRS Corps
 23 and EPA believe is a Water of the U.S.?
 24 A Yes, and I believe it's a drainage way.
 25 Q Okay. Are any of those officials that

1 you're -- you were referencing, none of those are
 2 tasked with the authority of enforcing the Clean Water
 3 Act, correct?
 4 A No.
 5 Q Okay. The last paragraph of your report is
 6 kind of a -- well, what is that last paragraph
 7 intended to be?
 8 A Oh, it's a disclaimer relative to insurance
 9 purposes.
 10 Q Okay.
 11 A So, in order -- we put it on any written
 12 report we sign we have some language in there that
 13 indicates if conditions change or, or things weren't
 14 observed, you know, that --
 15 Q Fair enough.
 16 A -- our liabilities are supposed to be
 17 minimized. I don't know if it's worth the paper it's
 18 written on, but insurance companies like to see it.
 19 Q That's fair.
 20 A The real decision is made in a court of law.
 21 Q Correct.
 22 MR. BIERI: Judge, if you can give me just a
 23 couple-minute break, I'll gather my thoughts.
 24 JUDGE BIRO: Sure.
 25 MR. BIERI: I think I'm done, but I just

1 want to check.
 2 JUDGE BIRO: We'll stand in recess for 10
 3 minutes.
 4 MR. BIERI: Thanks.
 5 (Whereupon, a short recess was taken.)
 6 JUDGE BIRO: Okay. Mr. Bieri, did you have
 7 an opportunity --
 8 MR. BIERI: Judge --
 9 JUDGE BIRO: -- to consult?
 10 MR. BIERI: Just a few more questions.
 11 Thank you.
 12 JUDGE BIRO: Okay.
 13 CONTINUED CROSS-EXAMINATION
 14 BY MR. BIERI:
 15 Q Sir, are you familiar with the regional
 16 supplements to the '87 manual?
 17 A Yes.
 18 Q All right. And do you know which one
 19 applies here?
 20 A It's the Midwest supplement. I believe it
 21 was published in 2010.
 22 Q Okay. I think I heard you testify on direct
 23 that you believe this tributary at issue only runs
 24 directly responsive to rainfall, correct?
 25 A Yes.

1 Q That's what you believe?
 2 A Yes.
 3 Q All right. And what do you mean by directly
 4 responsive to rainfall?
 5 A Well, a precipitation event occurs. Surface
 6 water. After it seeds, the moisture holding capacity
 7 of the soil begins to run off. It would collect in
 8 the drainage features on the upper end of the water
 9 shed and along the entire drainage way and begin to
 10 flow. In some cases, even if it was high enough,
 11 there could be some infiltration of that surface water
 12 out into the banks, particularly in the upper regions,
 13 which would then, you know, slowly come back into the
 14 channel over time.
 15 Q So, am I correct you don't think any portion
 16 of this channel carries ground water; is that right?
 17 A I think it's rare, you know, based on the
 18 likely depth to ground water up there. It's possible
 19 that the water table could get high enough in the
 20 hilltop areas to flow out into the channel, but I
 21 would question whether that water would make it all
 22 the way to Deep Creek. I think it would probably --
 23 most of it would infiltrate when it got down to the
 24 vegetated drainage way flat portion.
 25 Q All right. So, let's do one quick

1 hypothetical. Let's say it rains a quarter inch.
 2 We're not going to see water in that tributary 17 days
 3 later, correct?
 4 A It's unlikely.
 5 Q Very unlikely, right?
 6 A Yes.
 7 Q According to your opinion, which is only --
 8 this thing only runs responsive to rainfall, correct?
 9 A Correct.
 10 Q All right. Now, we've talked a lot about
 11 what you believe to be a lack of physical connection
 12 between the lower portion of this tributary to Deep
 13 Creek.
 14 MR. BIERI: May I approach, Your Honor?
 15 JUDGE BIRO: Yes, you may.
 16 MR. BIERI: Thank you.
 17 BY MR. BIERI:
 18 Q I'm showing you, sir, what's been marked as
 19 AX-10, page 20 of 22.
 20 A Yes.
 21 Q Here's a pen. Will you mark for me on that
 22 map where you see a lack of physical connection?
 23 MR. MCAFEE: Excuse me, Britt. What exhibit
 24 are we on? I'm sorry.
 25 MR. BIERI: AX-10.

1 MR. MCAFEE: What page?
 2 JUDGE BIRO: Twenty.
 3 MR. BIERI: Twenty.
 4 MR. MCAFEE: Thank you.
 5 THE WITNESS: Well, I, I, I only see the
 6 last (phonetic) on the road crossing, but there's a
 7 culvert there. So, it's a -- I do not see a lack of
 8 connection.
 9 BY MR. BIERI:
 10 Q Okay. Thank you. And then one other
 11 question for you. You've got a zoomed in portion, and
 12 this would be -- this is AX-10, page 19 of 22. This
 13 actually shows pretty much every bit of what you
 14 described as the lower reaches, correct?
 15 A Yeah.
 16 Q All right. Can you mark on that map where
 17 you see a lack of physical connection between that
 18 water body and Deep Creek?
 19 A There -- in this photo there is abundance.
 20 The water's running off, and it's running from the
 21 upland to the creek.
 22 Q And that's water?
 23 A Well, I -- actually, when I saw that, I
 24 thought it was snow, but --
 25 Q Water or snow.

1 A You know there's other photographs the same
 2 day. We talked about it. You know, it's, correct,
 3 water or snow.
 4 MR. BIERI: Thank you. Nothing further.
 5 JUDGE BIRO: Any redirect?
 6 MR. MCAFEE: I believe, just hopefully, one
 7 question, Your Honor. Thank you.
 8 (Whereupon, a discussion was held off the
 9 record.)
 10 REDIRECT EXAMINATION
 11 BY MR. MCAFEE:
 12 Q Mr. Hentges, Mr. Bieri just asked you about
 13 a hypothetical and a quarter-inch rainfall,
 14 et cetera --
 15 A Yes.
 16 Q And I believe you answered about whether you
 17 would see water in the tributary, whatever we're
 18 calling it. Did your answer apply to the entire area
 19 or a portion of it? I just want to make sure I'm
 20 clear. Did -- do you -- was there any -- would there
 21 be any differentiation where -- what part of the
 22 tributary you would see that?
 23 A I would assume, you know, if you saw it at
 24 all that late it'd be in the upper reaches of the
 25 tributary. It's, you know, it's really hard to say

1 quarter-inch, 17 days, I mean, you know, it depends on
 2 how wet the soils were initially, the height of the
 3 water table, what other forces are acting in the way
 4 of evapotranspiration and directive evaporation, and
 5 so it's kind of just a general question. I -- it
 6 could happen. I wouldn't expect it.
 7 MR. MCAFEE: Okay. Thank you. Nothing
 8 further.
 9 JUDGE BIRO: Do you have any re-cross?
 10 MR. BIERI: No. Thank you, Judge.
 11 JUDGE BIRO: Okay. Mr. Hentges, thank you
 12 very much for your testimony, but I'd, I'd like to ask
 13 just a couple of questions.
 14 THE WITNESS: Certainly, Your Honor.
 15 JUDGE BIRO: You used the term "erosional
 16 feature" quite a lot.
 17 THE WITNESS: Yes.
 18 JUDGE BIRO: Could you define that term for
 19 me?
 20 THE WITNESS: Well, it's, it's something
 21 when water's not present all the time. And it's more
 22 of a feature that's formed by land-forming
 23 processes -- so glacial features -- but certainly, it
 24 can be ravines or gullies.
 25 JUDGE BIRO: Could it be a channel?

1 THE WITNESS: Well, it could be a channel.
 2 JUDGE BIRO: Okay. Can you tell me if --
 3 when you were out there on the property -- did you see
 4 the waterway reforming again, where he had already
 5 tiled and he had covered it over with dirt and
 6 planted? But did you see the waterway reforming as it
 7 was before potentially? You hadn't seen it before,
 8 but --

9 THE WITNESS: Right. Right. No, but I'd
 10 seen photographs or aerials, and I -- to the point
 11 where I believe I'm familiar with what it likely
 12 looked like. I did see some sense of channelization,
 13 which you can kind of see in the aerials too in spots,
 14 not everywhere. And so, I guess the short answer is I
 15 did see some re-channelization, not completely, but in
 16 areas.

17 JUDGE BIRO: And were any of those areas in
 18 the lower part?

19 THE WITNESS: They were, and they appeared
 20 to be drainage from the area farm fields on each side
 21 coming in and then -- because that's kind of their
 22 sheet flow path -- and then either flowing a little
 23 ways or just puddling.

24 JUDGE BIRO: Okay. Mr. Morrow -- I believe
 25 you were here when he testified -- talked about

1 putting in some of these -- I forgot what he called
 2 them -- check dams. You talked about this too.

3 THE WITNESS: Yes.

4 JUDGE BIRO: In order to prevent soil
 5 erosion, and to keep his valuable soil. Can you put
 6 in those kind of dams without the tiling?

7 THE WITNESS: You can, but you'd have to
 8 make it -- the -- it becomes a problem of scale. In
 9 order to hold all the water back, you'd have to have a
 10 pretty high structure. So, instead of, let's say, a
 11 small two to three-foot berm, you know, you could be
 12 talking a four to six compacted foot -- compact wide
 13 -- 20-foot compacted clay to hold a lot of water back,
 14 and you get to a point where you need a permit for
 15 that too, just a small dam's permit. So, the -- by
 16 putting that bypass through, getting a bulk of the
 17 water out from the tile, he can collect the rest of
 18 the water that comes off his field that is very
 19 sediment laden, particularly with the silt held in
 20 place.

21 It, it does slowly -- oftentimes there's a
 22 tube and tile letting water out. But the point is it
 23 does it slowly over time, so that sediment drops
 24 instead of flowing out.

25 JUDGE BIRO: Okay.

1 THE WITNESS: I hope I answered your
 2 question.

3 JUDGE BIRO: I think I understand what
 4 you're saying, so, in order to - so, he didn't have to
 5 tile to accomplish what he wanted. He could have
 6 built bigger berms, but that would have required a
 7 permit too?

8 THE WITNESS: Yes.

9 JUDGE BIRO: Okay. Is there anything else
 10 he could have done to prevent that kind of runoff?

11 THE WITNESS: Well, more and more filter
 12 strips, where -- and it's essentially enlargement of
 13 the drainage way, so the vegetative buffer on either
 14 side is larger, and you know, that's something that
 15 you can do. They're starting to run these small swale
 16 vines through like, chopped up corn stalks, a large
 17 volume, maybe 10-foot deep, 20-foot long, and 10-foot
 18 wide, run all that tile line or drainage water through
 19 there, and the anaerobic bacterial action will take
 20 out nitrates and feed on the phosphorous, which are
 21 the nutrients of concern.

22 So, those are types of things that are being
 23 recommended, but, you know, the wider buffer strips
 24 take up more crop ground. The installation of
 25 anaerobic digesters is -- I mean, they work for about

1 -- they're expensive to install, and they work for
 2 about 10 to 15 years, and you've got to redo it. So,
 3 there's not a lot of ideas out there right now, and we
 4 need some more.

5 JUDGE BIRO: I know that Mr. Morrow
 6 testified that he is working with NCRS on some
 7 mitigation measures. Did your analysis and cite view
 8 give you any suggestions of how this could be
 9 mitigated or restored?

10 THE WITNESS: Yes. I saw some opportunities
 11 right on the site where, you know, you could do some
 12 mitigation. It would cost maybe some crop ground, but
 13 if he was allowed to extend his operation over the
 14 area in question, the former drainage way, you know,
 15 that might make up for it, perhaps not physically row
 16 for row, but in ease of operation and maintenance, and
 17 it involved kind of what he's already -- expanding
 18 what he's already got on the very end right near the
 19 creek.

20 He's got a large sediment trap because
 21 water's still getting in that area and kind of moving
 22 down where it did before that doesn't have access to
 23 the tile line. So, he's trapping that water. It's --
 24 there's a tube with a high inlet, that when it gets so
 25 high it starts to go in, and then it's perforated. It

1 goes down, and he's collecting that sediment.
2 I would say the first step would be to
3 expand a system like that and make it better because
4 it would impact less crop ground.

5 JUDGE BIRO: Okay. You had, I think, gone
6 over with Mr. Bieri. You said that the blue line
7 indicated an intermittent -- on the -- I think it was
8 a national geotopographical map indicated a -- the
9 blue line indicated an intermittent waterway, and
10 there's also green on the map. Is that a perennial
11 waterway? Is that how that would be defined?

12 THE WITNESS: The perennial waterways are
13 supposed to be blue also, and but they're not that
14 dash, three dots, dash, so that's the difference.
15 It's the difference in the -- than the actual line.

16 JUDGE BIRO: So, what's the green coloring
17 referencing?

18 THE WITNESS: You know, the only green I can
19 think of on a quad map if we don't look at one is --

20 JUDGE BIRO: Oh --

21 THE WITNESS: -- usually like timber.

22 JUDGE BIRO: I think I can find it again for
23 you. I think -- let's see. Was it AX --

24 MR. MCAFEE: Your Honor, would you like us
25 to put it up?

1 JUDGE BIRO: Sure. That would be great.

2 MR. MCAFEE: I think -- I believe it's
3 AX-11. I'm not --

4 JUDGE BIRO: Okay.

5 MR. BIERI: I got it.

6 JUDGE BIRO: Thank you. I'm sorry.

7 MR. BIERI: Of course.

8 MR. MCAFEE: Is that it?

9 MR. BIERI: Maybe. Hold on.

10 (Whereupon, a discussion was held off the
11 record.)

12 MR. BIERI: Here we go.

13 MR. MCAFEE: We're talking about the
14 topograph -- It's A -- excuse me. It's AX-31, page
15 13, is the topographical map.

16 THE WITNESS: Oh, yes. The green there.
17 Sure.

18 JUDGE BIRO: Yeah.

19 THE WITNESS: That's actually the tree cover
20 around the stream, so it's timber --

21 JUDGE BIRO: Okay.

22 THE WITNESS: -- that they're indicating.
23 And the -- I see now that the -- what I told you was
24 not quite checking out because the Deep Creek, which
25 is a perennial is also a dash and three dots, so it

1 kind of depends on the year of the map, when they
2 photo -- or when they photo revised it, but, you know,
3 essentially, the Corps of Engineers has always felt
4 that the blue line associated with these two streams
5 meant it was jurisdictional.

6 It's kind of a rule of thumb, not official,
7 but my point was is the U.S. geological survey didn't
8 field truth all these. And I believe, in this
9 particular case, they misinterpreted the border of the
10 stream --

11 JUDGE BIRO: Okay.

12 THE WITNESS: -- its permanency and the
13 number of times it flows.

14 JUDGE BIRO: You used the term "inclusions"
15 in your description. Could you just give me a
16 definition of that?

17 THE WITNESS: Yes. In the -- relative to
18 soils, inclusions are smaller areas than the actual
19 mass of where the soil exists that are a separate type
20 of soil, so it would just be zones where the soil type
21 differs. It has different characteristics.

22 JUDGE BIRO: Okay. Okay. I don't think I
23 have any more questions.

24 Mr. McAfee, do you have any questions you'd
25 like to ask to follow up?

1 MR. MCAFEE: No, I don't, Your Honor. Thank
2 you.

3 JUDGE BIRO: Okay. Mr. Bieri?

4 MR. BIERI: None from us. Thank you, Judge.

5 JUDGE BIRO: Okay. Thank you very much.

6 Thank you, Mr. Hentges.

7 THE WITNESS: Thank you, Your Honor.

8 (Witness excused.)

9 JUDGE BIRO: Mr. McAfee, do you have any
10 other witnesses you'd like to call?

11 MR. MCAFEE: We do not, Your Honor.

12 JUDGE BIRO: Okay.

13 MR. MCAFEE: Thank you.

14 JUDGE BIRO: Mr. Bieri, would you like to
15 call any rebuttal witnesses?

16 MR. BIERI: No. Thank you, Your Honor.

17 JUDGE BIRO: Okay. Then before we conclude,
18 I really don't see a need for closing arguments. We
19 give plenty of time to do post-hearing briefs, when
20 you'll have the transcript. You'll have all the
21 exhibits in front of you. You can lay out all the
22 arguments you want with references to something that
23 matters.

24 I want to go over the exhibits that we have
25 in this case, to make sure we all have an

1 understanding. I don't think -- my understanding is
2 that Respondent's 1 through 5 is in the record. I'm
3 not 100 percent sure if Respondent's Exhibit 6 made it
4 into the record.

5 MR. BIERI: I believe it did, and we --

6 JUDGE BIRO: Okay.

7 MR. BIERI: -- would stipulate to being in
8 the record, if it's not.

9 JUDGE BIRO: Okay. To the extent it wasn't
10 before, Respondent's Exhibit 6 is admitted into the
11 record.

12 That was a marked up document, and has
13 everybody been given copies of that, and you provided
14 a copy to the court reporter?

15 MR. MCAFEE: I have provided copies to
16 opposing counsel, Your Honor, and I have the original
17 to give to the court reporter right here.

18 JUDGE BIRO: Okay.

19 MR. MCAFEE: But I have additional copies
20 here for --

21 JUDGE BIRO: That'd be great. So, as I
22 mentioned earlier, the court reporter gets the
23 original exhibits. He will take them with him today.
24 He will produce them to our office with a copy of the
25 original transcript. Those exhibits will maintain --

1 be maintained by the hearing clerk separately as the
2 official record of this proceeding. I will rely on my
3 copy that I receive today to make my decision, so, you
4 know, to the extent that I've marked it up, those are
5 not going to be part of the official copy, and in the
6 event of any appeal, the official copy is what will go
7 up. That's why it's really important that we make
8 sure that the court reporter has all of the marked-up
9 exhibits exactly as they were marked.

10 MR. BIERI: May I ask a question?

11 JUDGE BIRO: Uh-huh.

12 MR. BIERI: In the post-hearing briefs, do
13 we attach -- if we're going to attach an exhibit, do
14 we attach copies of our own, or do we request, like,
15 an official copy?

16 JUDGE BIRO: I don't need copies of any
17 exhibits --

18 MR. BIERI: Oh.

19 JUDGE BIRO: -- attached to the briefs.

20 MR. BIERI: There you go.

21 JUDGE BIRO: I've got them all. You can
22 cite them, and we can decide how you're going to cite
23 them, but no exhibits. No more.

24 MR. BIERI: Now that you've mentioned it --
25 now that you've mentioned it, I was just thinking why

1 would we be attaching hundreds --

2 JUDGE BIRO: Yeah.

3 MR. BIERI: -- of pages of exhibits. Sorry
4 about that.

5 JUDGE BIRO: That's why we're going to go
6 over all of the exhibits and only these exhibits that
7 you can refer to in your post-hearing briefs, and that
8 will be the universe of documents I will look at to
9 make my decision, okay?

10 MR. BIERI: That makes sense, and I
11 apologize for the asinine question.

12 JUDGE BIRO: So, the universe of documents
13 we're going to look at in making the decision, the
14 testimony here today, any exhibit or fact that you
15 stipulated to, the fact that you stipulated to the
16 expertise of the expert witnesses, that was stipulated
17 to, Respondent's Exhibits 1 through 6, Agency
18 Exhibits, I believe it's 1 through 32, and then I'm
19 going to go over with you a list of exhibits,
20 additional ones that were marked up documents that we
21 introduced at this hearing.

22 If you, at any point, disagree, you know,
23 let's clarify that so we all have an understanding of
24 what's going to be included.

25 So, they were Agency Exhibit 11, page 8A;

1 Agency Exhibit 10, 5A; Agency Exhibit 10, 7A; AX-10,
2 8A; AX-26-3A; AX-10, 19A -- and I'm sorry. These are
3 not in numerical order. It's just as they came in --
4 AX-21, A; AX-1, 30A; AX-28, 1A; AX-30, 7A, AX-31,
5 Appendix B, page 28A; AX-10, 5B; AX-10, 7B; AX-10, 8B;
6 AX-26, 2A; AX-10, 9A, 12A, 14A, 15A, 18A, 19B, 20A,
7 21B, 22A; and the AX-29, 2A; AX-24A.

8 And why don't you take a few minutes. Maybe
9 you can check if those are the universe, or if that --
10 is that too difficult?

11 MR. MUEHLBERGER: We're going to verify
12 right now, Your Honor.

13 JUDGE BIRO: Okay.

14 MR. BIERI: No, that's good.

15 JUDGE BIRO: That'd be great.

16 MR. BIERI: Sorry.

17 (Pause.)

18 MR. MUEHLBERGER: Your Honor, all three of
19 us did not keep up completely with the list that you
20 gave us. So, I have a list that I would just like to
21 read them off and verify that they are on your list as
22 well.

23 JUDGE BIRO: Okay. Well, why don't you do
24 that with my staff attorney. Matt, maybe you can go
25 up and work with Mr. Muehlberger and see if we can get

1 this done.
 2 (Pause.)
 3 JUDGE BIRO: There's only so much of this
 4 dribble we need on the record.
 5 Go back on the record. We've had a chance
 6 to confer, and apparently, the list that I've just
 7 recited is consistent with the Agency's records, so
 8 that will be the universe of exhibits to be cited in
 9 this matter.
 10 (The documents referred to
 11 were marked for
 12 identification as Agency
 13 Exhibits 1 through 32; and
 14 Agency Exhibit No. 1-30A, and
 15 were received in evidence.)
 16 JUDGE BIRO: There's also a document that's
 17 been left up on the plate, if you want to get that.
 18 MR. BIERI: Can I go grab it?
 19 JUDGE BIRO: Yes.
 20 MR. BIERI: Sorry.
 21 JUDGE BIRO: When we get the transcript in a
 22 few weeks we'll send out a order that will set out
 23 time for filing exhibits.
 24 You can discuss, if you would like, among
 25 counsel, if you'd like to do simultaneous filings,

1 which means everybody will file their initial brief at
 2 the same time and their reply brief at the same time,
 3 or you can do sequential filings, so that the Agency,
 4 having the burden of proof, will have the opportunity
 5 to do its initial filing, and the Agency can -- then
 6 the Respondent can respond, and then the Agency will
 7 have a chance to respond to that, and then the
 8 Respondent will respond, tends to stretch out the
 9 briefing period a lot longer, but, you know, if that's
 10 what you'd like to do, we can do that too.
 11 You don't have to decide now --
 12 MR. MCAFEE: Okay.
 13 MR. BIERI: Oh.
 14 JUDGE BIRO: -- because we're not going to
 15 issue that order now.
 16 MR. MCAFEE: Okay.
 17 JUDGE BIRO: You can discuss it among
 18 yourselves and call my staff attorney, Matt Barnwell,
 19 and he'll work that into our order that we issue.
 20 After we get all the briefs, we'll hopefully
 21 issue a decision. It often can take six months, at
 22 least, from the time we get the briefs to write up and
 23 issue the decision. We'll issue it in writing, and
 24 you'll have a chance to see our whole analysis for
 25 coming to our decision and a chance to appeal if any

1 party's not happy with it.
 2 So, and with that, we'll close the hearing.
 3 Thank you, Mr. Jones.
 4 MR. JONES: Thank you.
 5 JUDGE BIRO: Okay. Thank you, gentlemen.
 6 MR. BIERI: Thank you, Judge.
 7 MR. MCAFEE: Thank you, Your Honor.
 8 (Whereupon, at 12:40 p.m., the hearing in
 9 the above-entitled matter adjourned.)
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REPORTER'S CERTIFICATE

DOCKET NO.: CWA-07-2018-0095
 CASE TITLE: C&S Enterprise, LLC
 HEARING DATE: October 4, 2018
 LOCATION: Des Moines, Iowa

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the United States Environmental Protection Agency, Office of Administrative Law Judges.

Date: October 4, 2018

David W. Jones
 Official Reporter
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