

STATE OF NORTH CAROLINA  
 COUNTY OF DUPLIN

IN THE OFFICE OF  
 ADMINISTRATIVE HEARINGS  
 NO. 10-EHR-5508

HOUSE OF RAEFORD FARMS, INC., )

Petitioner, )

v. )

NORTH CAROLINA DEPARTMENT OF )  
 ENVIRONMENT AND NATURAL )  
 RESOURCES, )

Respondent. )

TRANSCRIPT OF HEARING

Before Honorable Augustus B. Elkins II  
 Administrative Law Judge

WEDNESDAY, NOVEMBER 30, 2011

Courtroom B

Office of Administrative Hearings

1711 New Hope Church Road

Raleigh, North Carolina

9:30 a.m.

Volume 4 of 8

Pages 569 through 747

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1 seat, please, sir? Make yourself comfortable.

2           The Witness:           All right.

3           The Court:           If you would state your first  
4 and last name and spell them both?

5           The Witness:           Davey Wayne Cavanaugh,  
6 D-a-v-e-y, Wayne, W-a-y-n-e, Cavanaugh, C-a-v-e-n-a-u-g-h.

7           The Court:           Thank you. You may direct your  
8 attention to Ms. Jones there.

9                           D I R E C T   E X A M I N A T I O N       9:35 a.m.

10           By Ms. Jones:

11           Q     Good morning, Mr. Cavanaugh. I'll try to speak  
12 up. I'm having a little bit of a throat problem, so if you  
13 can't hear anything, let me know.

14           A     Okay.

15           Q     Mr. Cavanaugh, where are you from?

16           A     Wallace, North Carolina.

17           Q     Did you drive up from Wallace this morning?

18           A     Yes, ma'am.

19           Q     Well, thank you for coming up. How long have you  
20 lived in Wallace?

21           A     All my life.

22           Q     Wallace--is that Duplin County?

23           A     Yes, ma'am.

24           Q     Are you married?

25           A     Yes, ma'am.

1 Q Do you have kids?

2 A Yes, ma'am; two.

3 Q Are they in Duplin County also?

4 A Uh-huh.

5 Q What kind of work do you do for a living?

6 A Construction and electrical.

7 Q And when you say construction, what type of  
8 construction work do you do?

9 A Equipment construction, trackhoes, bobcats, and  
10 all kinds of dirt work.

11 Q Okay. How long have you been doing that type of  
12 work?

13 A 20 years plus.

14 Q And what locations do you do that work?

15 A Mostly in Duplin County.

16 Q Do you do work for the Rose Hill facility, House  
17 of Raeford Farms?

18 A Yes, ma'am.

19 Q Do you do work for other people also?

20 A Yes, ma'am.

21 Q How long have you done work for House of Raeford  
22 Farms?

23 A 20 years.

24 Q Do you work in different departments or different  
25 areas of the facility?

1           A     Yes, ma'am.

2           Q     There's been some testimony already about some  
3 work that was done on a pipe running between lagoon number 1  
4 and lagoon number 2 at that Rose Hill facility. Are you  
5 familiar with lagoon 1 and lagoon 2?

6           A     Yes, ma'am.

7           Q     And did you perform that work on a pipe between  
8 lagoon 1 and lagoon 2?

9           A     Yes, ma'am.

10          Q     Do you remember the dates of that work?

11          A     The latter part of September.

12          Q     If there's been testimony that that was 2009,  
13 would that---

14          A     (interposing) Right.

15          Q     ---seem correct?

16          A     Uh-huh.

17          Q     And if there was testimony that was in the early  
18 part of September of 2009, would that--would you think that  
19 was correct?

20          A     Yes, ma'am.

21          Q     Do you remember what you were asked to do between  
22 those two lagoons?

23          A     I just replaced the spillway between lagoon 1 and  
24 2.

25          Q     Okay. And when you say spillway, can you describe

1 what that is?

2 A It's basically a piece of 24 inch tile, I believe,  
3 with a valve in it that they control the water level in  
4 lagoon 1.

5 Q And let me ask you to look at some pictures that  
6 have already been admitted. If you'll look in--there should  
7 be an exhibit notebook up there. Look at Exhibit Number 8.  
8 Do you see a notebook up there? And there should be a tab  
9 that says number 8.

10 (Witness peruses documents.)

11 A Okay.

12 Q And these are photographs that were provided to us  
13 from the state. If you look at that top photograph there,  
14 what is that a photograph of?

15 A The spillway---

16 Q (interposing) Okay.

17 A ---in lagoon 1.

18 Q All right. So that's lagoon 1 where you see off  
19 to the top and right of the picture?

20 A Yes, ma'am.

21 Q And what's the dirt that you see in the bottom  
22 left-hand part of the picture?

23 A That's lagoon 2.

24 Q Is that the dirt to lagoon 2 or is that the  
25 divider between lagoon 1 and lagoon 2?

1           A     Oh. The dirt is the divider between 1 and 2.

2           Q     Okay.

3           A     Yes.

4           Q     Now, tell me about that wooden mechanism there.

5   What is that?

6           A     The what, now?

7           Q     Tell me about that wooden structure that's---

8           A     (interposing) It's just somewhere that they could  
9   walk on top of it to adjust their valve.

10          Q     Okay. And is that what you put in?

11          A     Yes, ma'am.

12          Q     And that metal thing that you can see in the  
13   middle of the picture with the wheel on top---

14          A     (interposing) That is the valve itself.

15          Q     Okay. And how does that valve work?

16          A     It's more or less like a slide valve. If they go  
17   to the right it closes it down, and to the left it opens it  
18   more.

19          Q     When the valve is open, what does that let happen?

20          A     More water run between 1 and 2.

21          Q     And is that just a gravity fed pipe or---

22          A     (interposing) Yes, ma'am.

23          Q     Okay. So there's no pump there?

24          A     No, ma'am.

25          Q     Okay. Now, if you look at that bottom picture, do

1 you recognize what that is?

2 A Yes, ma'am.

3 Q And what is that?

4 A That's the lagoon 2 side of the spillway.

5 Q Okay. And that pipe that's sticking out, is that  
6 what you're calling the spillway?

7 A That's the pipe from the lagoon 1.

8 Q To lagoon 2?

9 A To lagoon 2, yes.

10 Q And you replaced that pipe as a part of your work?

11 A Yeah. It's all--it was all made in one unit.

12 Q Okay. Now, tell me how you got started on that  
13 job. I mean what was the process that you used?

14 A To start with, we had some clay hauled in. And we  
15 built a dike approximately 10 foot off to the side of  
16 lagoon 1 approximately 3 foot high all the way around. And  
17 then we dug this pipe out, the old pipe.

18 And we had a little bit of water left that we had  
19 to pump out back into lagoon 2. And then we dropped the new  
20 pipe in, covered it back up, and dug our dirt back out of the  
21 dike, a real simple---

22 Q (interposing) Okay.

23 A ---procedure.

24 Q Let me make sure I understand the order. So you  
25 had some clay that was brought in and you said you built a

1 berm or a dike up in lagoon number 1?

2 A Right.

3 Q And what shape was that?

4 A It was in a round (indicating)---

5 Q So just like a little semicircle?

6 A Yes, ma'am.

7 Q And you said there was about 10 foot between the  
8 biggest portion of the---

9 Ms. LeVeaux: (interposing) Objection.

10 Objection, Your Honor, to what he said. If she's going to  
11 ask him what did he say, then that's fine, but she's telling  
12 him what he said, and objection.

13 The Court: That's sustained.

14 By Ms. Jones:

15 Q How far did you say it was from the dike wall to  
16 that berm that you built?

17 A Approximately 10 feet.

18 Q Okay. And---

19 A (interposing) It was approximately 4 foot--3 to 4  
20 foot high.

21 Q Okay. Was there any water left in that little  
22 enclosed area after you built---

23 A (interposing) Just a very little.

24 Q And what happened to that water?

25 A We pumped it back into lagoon 2.

1 Q Okay. How did you pump that?

2 A With a small Honda mud pump.

3 Q Okay. Where was the pump sitting?

4 A Approximately where the front of this V is  
5 (indicating), maybe 3 foot off of lagoon 1.

6 Q And was there a hose attached to the pump?

7 A Yes, ma'am.

8 Q Tell me about those hoses.

9 A One is a suction hose. It's approximately 15 feet  
10 long. The other one is a blue soft hose. It's probably 15  
11 to 20 feet long.

12 Q What was the diameter of those hoses?

13 A 3 inch.

14 Q Okay. And so there was--where was the longest  
15 hose located?

16 A Well, they're--both hoses were about the same. We  
17 had already pumped approximately 55 to 75 gallons that was  
18 left remainder---

19 Q (interposing) Okay.

20 A ---in the bottom. Some of it looked like mud, and  
21 like I said, the pump was somewhere between lagoon 1 and 2, I  
22 would say about 5 feet off of lagoon 1.

23 Q Were the hoses that you were using long enough to  
24 stretch from lagoon 1 to the creek behind the House of  
25 Raeford property?

1           A     No, ma'am, nowhere near it.

2           Q     Do you have a hose long enough to do that?

3           A     No, ma'am.

4           Q     In your work at House of Raeford have you ever  
5 seen a hose that long?

6           A     No, ma'am.

7           Q     And what did you use to put the clay into lagoon  
8 number 1?

9           A     My excavator.

10          Q     If you'll take a look at tab number 9, which will  
11 be Exhibit Number 9?

12          A     Yes, ma'am.

13                   (Witness complies.)

14          Q     And on that top photo to the right, there is a  
15 picture of an excavator, it looks like. Is that your  
16 excavator?

17          A     That's it.

18          Q     And in the bottom picture you can see it as well;  
19 is that correct?

20          A     That's it.

21          Q     Did you have any concerns about using that piece  
22 of equipment to do the work on the lagoon?

23          A     No, ma'am.

24          Q     Do you remember how long the process took?

25          A     Three to four days.



1           A     Yes, ma'am.

2           Q     Was all of that work associated with this pipe?

3           A     No, ma'am.

4           Q     Okay. How do you bill House of Raeford for your  
5 work?

6           A     By my--by the hours worked.

7           Q     Okay.

8           A     I keep all their locations separate, or depart-  
9 ments.

10          Q     What is that writing in the top left corner of  
11 the---

12          A     (interposing) That is the different departments  
13 that I worked. I had 180 hours in wastewater, which should  
14 have been putting this pipe in.

15          Q     Okay. And underneath that there are some other  
16 hours, 74 for tumbler; is that right?

17          A     Right. That's the part that was inside the plant  
18 itself.

19          Q     And 154 for building?

20          A     Yes, ma'am.

21          Q     And then there were some other hours there?

22          A     Right. That's--all them are departments in the  
23 plant.

24          Q     Okay. How--do you have a contract with House of  
25 Raeford?

1           A     No, ma'am. I work by the hour.

2           Q     Okay. And so you didn't have a contract--or did  
3 you have a contract for this pipe replacement job?

4           A     No, ma'am.

5           Q     Did you consider this a complex job?

6           A     This--no, ma'am.

7           Q     Did you consider it to be just a fairly routine  
8 job?

9           A     I didn't hear you.

10          Q     Would you consider this to be a fairly routine  
11 job?

12          A     Yes, ma'am.

13          Q     Mr. Cavanaugh, when you were out there doing your  
14 work, did you ever see anyone pumping from the lagoon to the  
15 creek?

16          A     No, ma'am.

17          Q     Did you ever see anyone pumping from the lagoon to  
18 a ditch?

19          A     No, ma'am.

20          Q     Did you ever see anyone pumping from the lagoon  
21 anywhere other than what you testified to?

22          A     No, ma'am, never.

23          Q     Were you supervising the entire job?

24          A     Yes, ma'am.

25          Q     And were you out there all day?

1           A     Yes, ma'am.

2           Q     And I think you--how many days did you say that  
3 the job probably took?

4           A     Probably three to four days, but we had the pipe  
5 in in the first day. And then we had to do a little wood  
6 work, did a lot of grading, cleaning, and planting grass and  
7 right on.

8           Ms. Jones:           Those are my questions.

9           The Court:           Cross-examination, Ms. LeVeaux.

10          Ms. LeVeaux:        Yes, Your Honor, just briefly.

11                    C R O S S - E X A M I N A T I O N       9:47 a.m.

12          By Ms. LeVeaux:

13          Q     Good morning.

14          A     Good morning.

15          Q     Mr. Cavanaugh, you said that you put clay--a clay  
16 liner to lagoon number 1. Let me just back you up. Could  
17 you just explain exactly what you did on the site from the  
18 moment that you first came on site and with whom you met and  
19 just give me the sequence of what took place on those--you  
20 said about four days? Just tell me step by step what  
21 happened.

22          A     The first day there I was with Joe Teachey. He  
23 was pretty much with me the whole--through the whole job.

24          Q     Do you recognize him as the operator in charge?

25          A     Right.

1           Q     Okay.

2           A     He already had the dirt hauled in in place.  And  
3 basically what we did to start with, I took my excavator,  
4 grabbed the dirt, and made a dirt pile in front of the water  
5 all the way around the spillway.

6           Q     Let me just stop you.  I'm just going to stop you  
7 there because I have questions as you move.  When you said he  
8 already had the dirt in place, what do you mean by that?

9           A     The dirt was hauled in on a dump truck and dumped  
10 out close to the number 1 lagoon.  The clay was hauled in,  
11 maybe a truckload of clay.

12          Q     Was it sitting on that ditch between the two  
13 lagoons?

14          A     Yes, uh-huh.

15          Q     I'm sorry, the dike, on the dike between the  
16 two---

17          A     (interposing)  The dirt for the dike was on the  
18 road between lagoon 1 and lagoon 2.

19          Q     And where was your truck?

20          A     The truck was not there.  They just--somebody--  
21 they had it hauled in.  I had nothing to do with that.  They  
22 just had it dumped out.  That is the dirt that I had to use.

23          Q     Okay, but did you bring your truck onto the dike?

24          A     No.  I had my excavator is the only thing I had on  
25 the dike.

1           Q     And how big is the excavator? Describe that for  
2 me.

3           A     It's a 26,000 pound machine. It's a Case CX130 is  
4 the size of it, which the picture of it is there. It's only  
5 approximately 8 foot wide.

6           Q     Okay. And you can go on. So he had the dirt on  
7 the dike?

8           A     The dirt was on the dike when I started the job.

9           Q     Okay.

10          A     Well, on the road between the two lagoons. And  
11 then I used that dirt to build my dike with. As soon as I  
12 got my dike in place---

13          Q     (interposing) Well, tell me how you built the  
14 dike. Did you observe any vegetation on top of lagoon  
15 number 1?

16          A     No, ma'am, none.

17          Q     None on top of lagoon number 1?

18          A     The only thing I did with the vegetation is just  
19 push it away from the--you know, it was more or less just  
20 floating on the top. As far as I could reach with my  
21 trackhoe, I just pushed it out of my way, and then I dropped  
22 my dirt right through the water.

23          Q     Okay. So you pushed it with the trackhoe? You  
24 didn't push it with your hands?

25          A     No, uh-huh; with the track machine.

1 Q Okay.

2 A Then I dropped my dirt and built my dike. And  
3 then we--I dug the old pipe out from under the road. Then I  
4 cleaned up--there was a little bit of water left, you know,  
5 that I had to pump out into lagoon 2. And then once I got  
6 all the water and got it all cleaned and got my grade set  
7 back and my pipe, I put the pipe in. And I still had enough  
8 new clay to put back around this pipe.

9 Q Did this all take one day?

10 A I put the pipe in and dug the whole pipe up in one  
11 day, yes, ma'am.

12 Q And what about the prep because you said it took a  
13 total of four--I'm just trying to understand what you did---

14 A (interposing) Right.

15 Q ---in those four days.

16 A I mean it was kind of a sloppy job the first day.  
17 I didn't do no finishing. Then we had to build our wood  
18 platform for them to walk on. The first day was the main  
19 work done. After that it was just more or less cosmetic.

20 Q So you built a temporary dam? Is that a fair  
21 statement?

22 A Right, uh-huh.

23 Q Before you built a permanent dam?

24 A What I was calling the dike---

25 Q (interposing) Dike, sorry.

1           A     --is what I'm calling the dam.  And it was just at  
2 the end of the lagoon, you know, at the end of that pipe,  
3 probably 10 foot off of the lagoon.  It's hard to explain  
4 without---

5           Q     Without a drawing or---

6           A     (interposing)  Without a drawing, yeah.

7           Q     What's the longest hose that you have--that you  
8 use with the work that you do?

9           A     40 foot.  I have two--I have two suction hoses and  
10 they're 20 foot long each.

11          Q     Okay.

12          A     I only had one on this vicinity--on this job.

13          Q     Have you ever had the occasion to use a coupler  
14 hose?

15          A     A what?

16          Q     A coupler hose.

17          A     No, ma'am.  These two--I mean these two 20 foot  
18 hoses will put--will come together, you know, but the total  
19 of that is 40 foot, if they were 20 foot.  But I'm guessing  
20 they're around 18 foot.

21          Q     But you have had the occasion to put those  
22 together?

23          A     Them two together, and that would give me 40 foot  
24 of hose total.

25          Q     As needed; correct?

1           A     Right.

2           Q     Okay.  And you indicated that the work was  
3 routine.  So tell me, routine in what manner?  What do you  
4 mean when you use the word "routine"?

5           A     Well, I mean there was nothing--it was no special  
6 job.  I'm saying that it was pretty laid forward and easy to  
7 do, you know.

8           Q     Have you done this work for other--you said you've  
9 worked in--this same type of work for other facilities?

10          A     Yes, ma'am, I have.

11          Q     And for whom?

12          A     I have done some work for Valley Proteins and---

13          Q     And when?

14          A     I've never put one of these exact devices in, but  
15 I mean we've done a lot of lagoon work at other locations.

16          Q     And one last question:  if you would, there's been  
17 an exhibit that's been put before you, Exhibit Number 33.  
18 Can you tell me which days align with the work that you did  
19 out at the House of Raeford?

20          A     You're asking the dates that I---

21          Q     (interposing)  Yes, sir.

22          A     ---performed the wastewater on?  The way I've got  
23 this bill broken out, it don't--it was---

24                   (Witness peruses document.)

25          Q     There's nothing to distinguish it.  It would

1 really just sort of be a guess, would it not?

2           A       Yeah, it would be at this time. I don't keep up  
3 with that. Maybe I should, but I don't.

4           Ms. LeVeaux:       Thank you very much.

5           The Court:         Redirect?

6           Ms. Jones:         I have no further questions.

7           The Court:         Let me ask just since you're on  
8 the stand here, Mr. Cavanaugh, did you--are you familiar with  
9 a creek being behind the House of Raeford?

10          The Witness:        No, sir.

11          The Court:         Okay. So you didn't see it or  
12 notice it there?

13          The Witness:        No, ma'am. No, sir.

14          The Court:         Did you smell anything while  
15 you were out there?

16          The Witness:        Nothing other--you know, just  
17 ordinary.

18          The Court:         Any questions based on my  
19 questions?

20          Ms. LeVeaux:        No, sir.

21          Ms. Jones:         No, Your Honor, but we would  
22 move that Exhibit 33 be admitted.

23          The Court:         Any objection?

24          Ms. LeVeaux:        No.

25          The Court:         Petitioner Exhibit 33 is

1 admitted, and you may step down. Thank you, sir.

2 (Petitioner Exhibit 33 was  
3 received in evidence.)

4 The Court: Your next witness, Mr. Jones.

5 Mr. Jones: Your Honor, I believe at this  
6 time we as petitioners are going to rest---

7 The Court: (interposing) Okay.

8 Mr. Jones: ---and submit the case. We may  
9 want to reserve the right to bring some of these folks back  
10 for rebuttal.

11 The Court: Okay.

12 (Petitioner rests at 9:55 a.m.)

13 The Court: And I believe you've already  
14 given an opening statement, Ms. LeVeaux. Am I correct?

15 Ms. LeVeaux: Well, Your Honor, we did more  
16 or less briefly, we're going to--we don't have any of our  
17 documents here. We had no idea they were going to rest, and  
18 so we're going to have to get all of our trial notebooks--  
19 make sure they're in place.

20 The Court: Okay. If we take about a 30  
21 minute break---

22 Ms. LeVeaux: (interposing) Thank you, sir.

23 The Court: ---about 10:30---

24 Ms. LeVeaux: (interposing) That sounds  
25 good.

1           The Court:           ---then we'll start back then.

2           Ms. LeVeaux:           Thank you.

3           The Court:           We'll be in recess till then.

4           Ms. LeVeaux:           Thank you, sir.

5           The Court:           Thank you.

6           The Reporter:           Off the record.           9:55 a.m.

7           (A brief recess was taken.)

8           The Reporter:           On the record.           10:48 a.m.

9                               (Respondent Exhibits 1-30 were

10                              premarked for identification.)

11           The Court:           This hearing will come to

12 order. It's now 10:45 on November 30th, 2011. All parties

13 present when we recessed are again present with the exception

14 of our last witness, who completed their testimony. Ms.

15 LeVeaux.

16           Ms. LeVeaux:           Thank you, Your Honor. Your

17 Honor, at this time the state will call Linda Willis to the

18 stand. And if I might approach the bench, I'm going to hand

19 up our trial notebooks.

20           The Court:           Surely.

21           (Pause.)

22           The Court:           Do you have a preference to be

23 sworn or affirmed?

24           Ms. Willis:           I'll be sworn, please.

25           The Court:           Okay.

1 (Whereupon,

2 **LINDA WILLIS**

3 was called as a witness, duly sworn, and testified as  
4 follows:)

5 The Court: Step up and have a seat and  
6 make yourself comfortable. If you would state your first and  
7 last name and spell them both?

8 The Witness: My first name is Linda, last  
9 name Willis, L-i-n-d-a, Willis, W-i-l-l-i-s.

10 The Court: Thank you. You may direct your  
11 attention to Ms. LeVeaux.

12 Ms. LeVeaux: Thank you, Your Honor.

13 **D I R E C T E X A M I N A T I O N** 10:50 a.m.

14 By Ms. LeVeaux:

15 Q Ms. Willis, I'm going to ask you to speak up and  
16 I'm going to ask you to speak clearly. Could you please tell  
17 the Court for whom you work?

18 A I work for the North Carolina Department of  
19 Environment and Natural Resources with the Division of Water  
20 Quality, the Surface Water Protection Section.

21 Q And how long have you worked in that position?

22 A I have been with the Division of Water Quality  
23 over eight years.

24 Q Sorry?

25 A Over eight years.

1           Q     And if you will, briefly tell the Court what it is  
2 that you do.

3           A     I am an environmental engineer for the division.  
4 I review and approve plans and specifications for authoriza-  
5 tions to construct for wastewater treatment plant systems. I  
6 respond to fish kills, oil spills. I am a team leader in the  
7 office for the compliance program for the NPDES compliance  
8 program.

9           Q     And also, Ms. Willis, if you will, tell--explain  
10 to the Court--talk about your education and your work  
11 experience. And if you could just take us on a timeline, if  
12 you will, from--did you graduate from college?

13          A     I did. I have a bachelor of science degree in  
14 chemistry, and I received that degree from the University of  
15 North Carolina in Greensboro. I have a master's of science  
16 in environmental engineering from the New Mexico State  
17 University. I have worked--my environmental experience goes  
18 back to the late--or mid-'90s basically.

19          Q     Let me stop you, Ms. Willis, just for a minute  
20 before you leave your education. When you--you said you have  
21 a master's. Did you write a thesis?

22          A     I did.

23          Q     And what was that thesis on?

24          A     My thesis was on groundwater remediation, in situ  
25 groundwater remediation for a dairy impacted groundwater

1 aquifer. While I was working--while I was working--I worked  
2 for the New Mexico State University through an assistant-  
3 ship. And one of the projects besides this aquifer study  
4 that I did was also a study for the Air Force studying the  
5 effects of various solvents, mixtures of solvents on the  
6 microorganisms in wastewater treatment plants, inhibitory  
7 type effects to wastewater treatment plants.

8 My groundwater research was focused on a row of  
9 dairies, about 12, 13 dairies, in a small vicinity in a place  
10 called Mesquite, New Mexico. And these were concentrated  
11 feedlots for dairy cows, and the aquifer was impacted by  
12 nitrates from the waste from the cows.

13 And one of the problems that they had in that  
14 particular area was a problem with blue baby syndrome. Some  
15 of the locals in the area were suffering with loss of small  
16 children, babies, due to the intake of nitrates from the  
17 groundwater. So this project was to try to focus on how to  
18 remediate the nitrates out of that groundwater to make the  
19 water safe for drinking.

20 Q And you can go on.

21 A I worked for--Ecoflo, Incorporated was one of my  
22 first environmental experiences. I was hired into that  
23 company to provide a service as a regulatory coordinator. I  
24 determined what waste characteristics were for various  
25 hazardous wastes and nonhazardous wastes so that they could

1 be properly shipped on the roads. And I also helped find the  
2 homes, appropriate disposal outlets, for various types of  
3 wastes that are produced by industry.

4 Q Did you deal with any animal waste?

5 A Not during my experience with Ecoflo. I have been  
6 exposed to the animal waste while I've worked for the  
7 Division of Water Quality.

8 Q Okay. And then if you'll just continue with the  
9 explanation of your work experience?

10 A Okay. I worked for three years as a regulatory  
11 coordinator for Ecoflo, Incorporated. I was then promoted  
12 into a sales position to work directly with the industries  
13 providing services such as waste minimization and  
14 characterizing their hazardous waste for the regulatory  
15 coordinators to properly code the waste for transport and  
16 disposal.

17 Q And was it at that juncture that you began to work  
18 with the Department of Environment and Natural Resources?

19 A No. I left Ecoflo to go to New Mexico State  
20 University and work on my master's degree for the environ-  
21 mental engineering degree.

22 Q And after you secured your degree?

23 A I worked for a short period of time while I was  
24 writing my thesis--New Mexico State would pay for my  
25 education as long as I was taking at least 13 credits. And

1 when I finished my course work, I was basically out of a job,  
2 so I went to work in Las Cruces, New Mexico as a--I worked in  
3 what they called a cage at a brokerage firm at AG Edwards.

4           And after working in the cage for probably about  
5 five or six months, the manager of that branch offered me a  
6 position to become a stockbroker. And so they supported me  
7 in getting my Series 6, Series 7, and Series 35 registration  
8 to become a broker.

9           So I worked as a broker for a couple of years with  
10 AG Edwards, moved to Morgan Stanley and worked for Morgan  
11 Stanley for about a year or two, and then chose to come back  
12 to North Carolina to--I have a property in Wilmington. I  
13 have a home in Wilmington, so I returned to Wilmington and  
14 found a job with the Division of Water Quality. And that's  
15 when I began my career with the division.

16           Q     And about what year was that?

17           A     That was in 2003.

18           Q     And then if you will go forward from that point  
19 and explain exactly what you started doing and leading up to  
20 what you're doing right now?

21           A     I was hired in by Rick Shiver, and he hired me for  
22 the position of a chemist. And the chemist position entailed  
23 reviewing daily monitoring reports for our surface dis-  
24 charging wastewater treatment plants. We have approximately  
25 about 130 wastewater treatment plants in our region. Our

1 region covers seven counties including Duplin County.

2           One of the duties was also to inspect these  
3 wastewater treatment plants to ensure that they're properly  
4 operating and maintaining their wastewater treatment  
5 facilities in order to meet their permit limitations for  
6 discharge. And I also responded to fish kills and oil  
7 spills, chemical spills, public complaints.

8           Q     And is that your current--is that still your  
9 current title and position?

10          A     No. I was--shortly after--I guess it was probably  
11 within a year, I was promoted to the Chemist II position and  
12 became the lead in the compliance for the NPDES wastewater  
13 permits for our domestic wastewater treatment plants and our  
14 industrial surface water discharge plants.

15          Q     And what's NPDES? What does that stand for?

16          A     National Pollutant Discharge Elimination System.

17          Q     And what's the purpose of that?

18          A     It is to---

19          Q     (interposing) Do you know? I mean what was--how  
20 do you distinguish that from what you were doing when you're  
21 dealing with the NPDES permit?

22          A     I'm sorry. How did I---

23          Q     (interposing) How do you distinguish dealing with  
24 the NPDES permits from what you were doing prior to having  
25 that responsibility?

1           A       Well, the National Pollutant Discharge Elimination  
2 System is a--was brought around by the Clean Water Act. And  
3 it requires that municipalities treat their wastewater prior  
4 to discharging to surface water. So it's a heavy emphasis on  
5 wastewater treatment processes.

6           Q       And so is your current position Chemist II?

7           A       No. I was promoted within probably two and a  
8 half, three years to the environmental engineer's position.  
9 And I continued to inspect wastewater treatment plants as  
10 support to my old position, which was the Chemist II  
11 position, and also the Chemist I position had been--we had  
12 two inspectors to cover inspections for wastewater treatment  
13 facilities. And I helped train the two new--actually, I've  
14 trained several people that have come in and taken these  
15 positions behind me.

16                   And then I was also given the compliance program  
17 for the NPDES stormwater permitting area. And so that  
18 entails also inspecting industrial facilities that are  
19 covered under an NPDES stormwater permit.

20           Q       And does that take you to your current position?

21           A       Yes.

22           Q       Okay. And tell the Court, if you will, about the  
23 areas that you are responsible to as it relates to Duplin  
24 County.

25           A       Basically the inspections for any of the

1 facilities that hold an NPDES stormwater permit, and also  
2 I've had familiarity and the responsibility of inspecting the  
3 municipal wastewater treatment plants that are in Duplin  
4 County such as the Rose Hill wastewater treatment plant and  
5 the town of Wallace wastewater treatment plants.

6 Q Are you familiar with Carolina By-Products and  
7 Duplin Winery?

8 A I am.

9 Q There's been reference to Carolina By-Products and  
10 Duplin Winery. Tell the Court briefly what you know about  
11 Carolina By-Products.

12 A Carolina By-Products is a rendering plant and they  
13 receive--they receive offal from various facilities in the  
14 area.

15 Q And explain to the Court what offal is.

16 A Offal is the innards of the--of chickens, turkeys,  
17 swine. And they also take feathers and they take blood from  
18 the slaughterhouses and also the skimmings from DAF units,  
19 which is basically grease and oil and solids.

20 Q And have you had an occasion to go out to Carolina  
21 By-Products?

22 A I have. I inspected Carolina By-Products in March  
23 of 2009. And it was--it was in response to a complaint that  
24 we received of a waste in Beaverdam Branch. So I went to  
25 Carolina By-Products to conduct a stormwater inspection.

1           And when we went to the--when we went to the  
2 complaint--when we went to Beaverdam Branch, we did not see  
3 anything on the surface of the water. Whatever had happened  
4 there was--it had been an old event. We were able to  
5 detect---

6           Q     (interposing) When you say old events, how do you  
7 know it's an old event?

8           A     There were impacts to the dissolved oxygen on the  
9 bottom of the creek, but the surface of the creek or the  
10 upper layer of the water in the creek was--the dissolved  
11 oxygen was close to normal. It was maybe 3 to 4 milligrams  
12 per liter.

13          Q     How do you know the dissolved---

14          A     (interposing) It was very depressed at the  
15 bottom.

16          Q     I'm sorry?

17          A     It was very depressed at the bottom.

18          Q     And how do you know where the dissolved oxygen was  
19 and what was going on with that body of water?

20          A     We have a dissolved oxygen meter that we can  
21 measure the dissolved oxygen in stream. It has a long cord  
22 on it so you can drop it down to the bottom of the creek or  
23 raise it up to the surface of the creek, and so you can  
24 measure the dissolved oxygen within the column of water.

25          Q     On that visit you did in fact measure the

1 dissolved oxygen?

2 A We did.

3 Q And made the determinations you just spoke to?

4 A Yes.

5 Q And you indicated that they have a stormwater  
6 permit?

7 A They have an NPDES stormwater permit, and the  
8 permit that they have is for food and kindred products. It's  
9 an NC General 060000 permit.

10 Q And is that an important permit or what's the  
11 purpose of that as it relates--to be distinguished from  
12 wastewater?

13 A It is not a wastewater permit. It is a stormwater  
14 permit. It is--what this permit is focused on are the  
15 industrial activities on site that could potentially cause  
16 pollutants of concern to come into contact with stormwater.  
17 So the purpose of the permit is to ensure and to  
18 drive good housekeeping and--good housekeeping practices and  
19 best management practices in order to protect the stormwater  
20 from coming into contact with pollutants of concern.

21 Q And you referenced to contact with pollutants of  
22 concern. Is there any concern as it relates to that storm-  
23 water coming into contact with the waters of the state?

24 A There could be.

25 Q And explain---

1           A       (interposing) That's why the permit is required.  
2 These are--there are various industries that the  
3 Environmental Protection Agency has identified as industries  
4 that could pose problems or introduce pollutants to storm-  
5 water. And so the permit is required for all--any facility  
6 that's operating--they identify these various industries by  
7 standard industrial code called an SIC code.

8           The industries are required to apply for the  
9 permit. They have two options basically. They either have  
10 to apply for the permit or they have to apply for a new  
11 exposure. And if they apply for a new exposure, they have to  
12 be able to demonstrate that their facility--the facility  
13 basically has absolutely no chance of having exposure of the  
14 type of pollutants that they have that's indicative with that  
15 type of industry that would be exposed to stormwater.

16           And there's very few industries--if this an  
17 industry that is identified by the EPA as requiring a storm-  
18 water permit, in my experience there's very few industries  
19 that would qualify for a no exposure.

20           Q       And is Carolina By-Products or Valley Proteins one  
21 of the industries that was identified as needing that storm-  
22 water permit?

23           A       Yes.

24           Q       So what was the nature of the industries? Is  
25 there a description for the industry?

1           A     Basically food and kindred.  It's industries that  
2 either handle or manufacture food, or in this case, these  
3 are--being a rendering plant, it falls under the standard  
4 industrial code classification for this food and kindred  
5 product.

6           Q     Have you had an occasion to go to Duplin Winery?

7           A     Yes.

8           Q     What do they do there?

9           A     Duplin Winery makes wine.

10          Q     Okay.  Have you had the--what was the occasion  
11 under which you went to Duplin Winery?

12          A     Pursuant to the complaint that we had in March, I  
13 had decided to take a look at all of the industries in that  
14 area, in that watershed area.

15          Q     This is March 2009?

16          A     Yes, this goes back to March 2009.  I focused my  
17 efforts, the compliance efforts, in that area and identified  
18 all the industries that had NPDES stormwater permits and put  
19 those on my schedule to inspect in the area.

20                 And so Duplin Winery was one.  They had the--they  
21 also had the food and kindred stormwater permit, the NC  
22 General 060000 permit.  They had--Carolina By-Products has  
23 the NCG 060000 permit.  Big Ed Feed Mill, which is right  
24 across the road from House of Raeford chicken slaughterhouse,  
25 has the NC General 060000 permit.

1 Q And that's owned by House of Raeford?

2 A Yes.

3 Q Or there's some ownership interest?

4 A Yes. Yes.

5 Q Anyone else?

6 A There are two other industries in the area. The  
7 chicken hatchery--Nash Johnson chicken hatchery and turkey  
8 hatchery have NPDES wastewater permits for cooling tower  
9 boiler blowdown.

10 Q Anyone else?

11 (Pause.)

12 Q Did House of Raeford?

13 A House of Raeford did not have the NC General  
14 permit, the 060000, no.

15 Q Were they excluded under that provision?

16 A No. They were--they were required to have the  
17 permit.

18 Q Okay. And tell me, if you will, or if you know,  
19 the type of waste produced by Duplin Winery.

20 A It's a--it's a plant waste. They bring in grapes.  
21 They have a process that will separate out the stems, twigs,  
22 leaves from the grapes. And the grapes go to the mashers  
23 that basically mash the grapes.

24 The hulls and the seeds from the grapes are  
25 separated out and the juice basically goes to the fermenters.

1 The hulls and the seeds are then land applied. The waste-  
2 water that the Duplin Winery generated was from the washdown  
3 of the fermenters after the wine has been made.

4 Q And does the--where does the wastewater go from  
5 the facility? Do you know?

6 A It went to a small lagoon---

7 Q So they have their own---

8 A ---at the back of the facility.

9 Q ---small lagoon. What's that lagoon look like?

10 A It was very--the wastewater in their lagoon was  
11 septic every time I've seen the waste--their wastewater.

12 Q Describe for the Court what septic means in that  
13 instance.

14 A It's basically black in color, just very dark.

15 Q Carolina By-Products/Valley Proteins also has a  
16 waste, so do they look the same or--because they both go to  
17 their respective lagoons; correct?

18 A Right. It's a different---

19 Q (interposing) So describe---

20 A (interposing) It's a different waste.

21 Q How is it different?

22 A The rendering plant generates a--their waste goes  
23 through a DAF unit. The DAF is the dissolved air floatation  
24 device. It sends air through the wastewater, the air  
25 bubbles--it's a fine diffused air. And the air bubbles--the

1 grease and oils in the wastewater adheres to the bubbles and  
2 it floats the grease and oils to the surface of this treat-  
3 ment unit. And then the treatment unit has a skimmer on it  
4 that will skim the floating sludge off the top of their  
5 wastewater.

6           That floating sludge then goes back into their  
7 rendering. They reuse it. It's a waste--it's a waste  
8 product. It's wasted out of their wastewater treatment  
9 system, but it's wasted out and reused in the rendering  
10 process.

11           Q     So it's recyclable, then?

12           A     It is.

13           Q     Is that a fair statement?

14           A     Yes.

15           Q     And then how do you distinguish that from Duplin  
16 Winery's---

17           A     (interposing) Let me--I'll finish with the  
18 liquid. The liquid waste--after the DAF takes the floating  
19 grease and oil off the top, the liquid waste then goes to  
20 their aeration basin. And they have several large surface  
21 aerators in their primary lagoon. It aerates the waste. And  
22 then they'll have a second and also--they have two or three  
23 lagoons in series after that that the wastewater then flows  
24 to.

25           Q     Have you been out to their lagoons?

1           A     I have.

2           Q     Familiar with the area?

3           A     Yes.

4           Q     And so tell me about their lagoons and if you know  
5 about the--if there is any connection to Cabin Branch or  
6 Beaverdam Branch.

7           A     Their lagoons are adjacent to a large wetland.  
8 The wetland is--I'm not sure how far away the wetland  
9 actually is. It's probably several hundred feet. It's--the  
10 lagoons are up--basically Carolina By-Products is on a--it's  
11 on an elevated like a ridge. And the lagoons are right on  
12 the edge on the north side of their property.

13                     The area from the lagoons slopes towards a low  
14 area, but the--for instance, if they were to have a spill,  
15 that spill would have to go a pretty good distance across dry  
16 land before it's going to get into a wetland.

17           Q     Now, we've seen pictures of that wetland, and it's  
18 been depicted as a blue body of water. Is that a fair  
19 depiction from your experience in going out to that particu-  
20 lar area?

21           A     Yes.

22           Q     So when I see a blue body of water, I think it's a  
23 lake. How would you distinguish a wetland from a lake?

24           A     Well, a wetland can have a lot of water in it, but  
25 a wetland can also be dry at times. The definition of a

1 wetland just means that it has water in it in the upper  
2 12 inches for certain periods of time. It doesn't have to be  
3 standing water all the time.

4           For this particular wetland, it just basically  
5 depends on whether--what the drought--whether we have a  
6 drought, whether we're in a rainy period. It can have some--  
7 things like beaver dams can have some influence in holding  
8 water in the area. But a lot of it is going to depend on  
9 what kind of input it's getting from rain events, precipita-  
10 tion.

11           Q     And tell me, if you will--you said you've been out  
12 to the lagoons. How many lagoons do they have? Did you say?

13           A     I believe they have three right there at their  
14 facility. I don't--their lagoons are not lagoons that I  
15 would inspect. Only if I were inspecting them for a  
16 potential release would be the reason I would look at their  
17 lagoons, inspect their lagoons, or if they were posing a  
18 problem for stormwater runoff.

19           Q     But you have been out to their lagoons?

20           A     I have, yes.

21           Q     But you're--are you telling me, then, there's not  
22 been any release or discharge from their lagoons that you're  
23 aware of?

24           A     I never saw any evidence of any release from their  
25 lagoons at any time that I have ever been to their facility.

1           Q     But you're familiar with the area.  If there were  
2 a release, do you have an opinion as to where that release  
3 would go?

4           A     If it would--if they had a--if they had an over-  
5 topping or a spill on the north side of their lagoons, I  
6 would say it would probably go to the wetland area.  That is  
7 the headwaters--would be the headwaters of Cabin Branch.

8           Q     And so you said that--and then with the lagoons,  
9 you said north side.  So is there another side?

10          A     There would be the south side then---

11          Q     (interposing)  Okay.

12          A     ---of the lagoons.  And that area slopes  
13 basically, depending on whether you're on the east or west  
14 side of those lagoons--you know, on the east end or the west  
15 end of those lagoons, they do have a network of ditches on  
16 their property that if there was an overtopping on the south  
17 side of those lagoons, it's conceivable that it could get  
18 into the ditches that would discharge to Taylor's Creek,  
19 which is a different watershed.

20          Q     And all of that would be apparent on a topo map?

21          A     Yes.

22          Q     And what's a topo map?

23          A     Well, a topography map shows elevations.  It  
24 indicates elevations.  It indicates high areas and low areas.

25          Q     And could that also be indicative on a--or

1 indicated on a contour map, or is that a topography map as  
2 well?

3 A I view them one and the same---

4 Q (interposing) Okay.

5 A ---contour map---

6 Q (interposing) And what about the USGS?

7 A The USGS maps, depending on how they're--on a USGS  
8 map, yes, it shows elevations, yes.

9 Q And so---

10 A (interposing) And drainage features; high areas,  
11 drainage features, streams, lakes.

12 Q Okay. And you said that there was a difference--  
13 you were explaining the difference between the waste from  
14 Carolina By-Products/Valley Protein versus Duplin Winery.  
15 And you talked about the DAF unit and how that--and I don't  
16 want to testify. Will you please distinguish---

17 A (interposing) The difference between them.

18 Q ---between each one? Just go on with your  
19 explanation, please.

20 A Duplin Winery's wastewater is a--there is no  
21 floating--they don't generate a floating sludge that is oily,  
22 greasy. And they have a wastewater treatment facility now.  
23 When I viewed their lagoons back in 2009, they were--they  
24 were already holding septic water.

25 There was no evidence of any floating sludge at

1 all. There's no light brown, creamy-looking sludge that is  
2 generated from their--from their waste. It's just a--to me  
3 it had more of a greenish color to it, if it was--when it  
4 was--when it's first generated, it almost looks like a--like  
5 a--just a greenish colored liquid. But as it sets, it turns  
6 septic and would turn black in color. And it has--it does  
7 have a foul odor. It can have a foul odor if it's not  
8 aerated.

9 Q And so you said in March of 2009, you visited  
10 Carolina By-Products/Valley Proteins and Duplin Winery. Did  
11 you go anyplace else?

12 A I went to the Big Ed Feed Mill. I went to Parker  
13 Bark, which is right adjacent to House of Raeford. Parker  
14 Bark is a mulch facility. I had visited both the turkey and  
15 the chicken hatchery.

16 Q And did you discover any problems there?

17 A At Parker Bark or---

18 Q At these two other places, or three other places?

19 A Parker Bark needed a permit, and so we--I worked  
20 with Mr. Parker to get their NPDES permit. They require the  
21 NC General 210000 permit, which is another stormwater permit  
22 that is specific to industries that handle wood products,  
23 wood chips and mulch.

24 Q Have you--do they generate a waste?

25 A They do not generate a waste. They generate--

1 they'll have stormwater runoff from the site, but they are  
2 not--their industrial activity is not identified as  
3 generating a wastewater.

4 Q And what about Big Ed's or the chicken or turkey  
5 hatcheries?

6 A Big Ed has the food and kindred products general  
7 permit, stormwater permit, and they do not. They also have a  
8 cooling tower, an NC General 510--or excuse me, 500000 permit  
9 which is a--it is identified as a wastewater discharge. The  
10 pollutant of concern there and the reason why it's called a  
11 wastewater is that temperature can also be a pollutant of  
12 concern. So it's identified as a wastewater.

13 So Big Ed has the NC General 060000 permit, which  
14 is a stormwater permit. And they also have the NC General  
15 500000 permit, which is a permit for cooling tower boiler  
16 blowdown discharge.

17 Q And what about the hatcheries?

18 A The hatcheries have the NC General 500000 permit  
19 for cooling tower boiler blowdown.

20 Q And do they---

21 A (interposing) They do not have--they do not have  
22 the general permit for food and kindred products, and I  
23 would--yeah. It would not apply there.

24 Q Now, are there any other hog farms in the area?

25 A There are two hog farms that I had inspected--

1 Geoff Kegley and I inspected--in September of '09. And  
2 they're adjacent to a feeder creek that--an unnamed tributary  
3 that comes into Beaverdam Branch. They're off Parker--  
4 Johnson Parker Road.

5 Q Okay. And have you had a problem--or tell the  
6 Court, if you will, if you've ever had a problem with Duplin  
7 Winery as it relates to a direct discharge.

8 A They did have a direct discharge of wastewater to  
9 the ditch that's located behind their facility.

10 Q Do you know when that was?

11 A I found the discharge in 2009, so they were  
12 discharging. I can't--I can't speak to how long they had  
13 been discharging, but I can say that they were discharging in  
14 September of 2009 to the ditch.

15 Q Do you know if it was before or after the  
16 discharge that occurred on or about September the 10th, 2009?

17 A Before.

18 Q As a result of that discharge, were any remedia-  
19 tion--was any remediation put in place?

20 A They were--they were required to provide adequate  
21 treatment--or disposal, adequate disposal, appropriate  
22 disposal for their wastewater. There were various avenues  
23 that they could consider, pump and haul.

24 They could build a wastewater treatment plant that  
25 would be able to--where they could get an actual NPDES permit

1 themselves to discharge, or they could figure out how to  
2 build a system that would get the wastewater to the town of  
3 Rose Hill wastewater treatment plant.

4 Q And did they do that?

5 A They did. They chose--the option they chose was  
6 to build a wastewater treatment system that would meet permit  
7 limits that would be imposed upon them by the Town of Rose  
8 Hill to discharge to their wastewater treatment plant, which  
9 also entailed putting in a collection system to convey the  
10 wastewater to a collection system off Yellow Cut Road.

11 Q There was also a fish kill that occurred earlier  
12 in that area. Can you tell us a little bit about that?

13 A We received a--that was the complaint I had  
14 mentioned in March of '09. The complainant said that there  
15 were--that there was a fish kill, and we did notice a few  
16 dead fish. But the event was--what we found out after  
17 talking to the complainant was that the first time they  
18 noticed dead fish was two weeks in advance. So we didn't get  
19 the call until it was already two weeks old.

20 Q If he had not told you that he noticed it two  
21 weeks earlier, could you discern from your inspections  
22 whether or not it was an early or a recent fish kill?

23 A I'm sorry. Could you repeat that?

24 Q You said it was an old fish kill. But if he  
25 hadn't told you that he had made his initial observations two

1 weeks prior, in just inspecting and looking at what you  
2 observed on or about the day that you went out there in March  
3 2009, could you tell that it was an old or a recent fish  
4 kill?

5 A Yes.

6 Q How?

7 A Due to the dissolved oxygen, the fact that we were  
8 still--we were still getting a very low dissolved oxygen at  
9 the bottom. And usually you're not going to get a fish kill  
10 unless there's a problem in the creek in the surface water.

11 Q So--but there's been evidence--and you've been  
12 here through the course of the trial. There's been evidence  
13 of low DO taken by Petitioner's experts, so that in and of  
14 itself doesn't indicate a fish kill, does it?

15 A No. Fish can--I mean fish can move away from an  
16 environment where the dissolved oxygen may be low. When they  
17 can't get away is if there's a case where there's a large  
18 spill and they can't--they're basically trapped in that area  
19 or can't move away from the condition quick enough. But a  
20 gradual--I think gradual drifts in DO fish can avoid.

21 Q Do you--are you familiar with that area?

22 A I'm very familiar with that area.

23 Q Okay. And so there's been evidence of low DO.  
24 Does that evidence surprise you?

25 A No. There are--there can be occasions where

1 you'll have low DO. This is--this entire creek system is--  
2 it's a low flow system anyway. Basically what drives flow in  
3 that creek is primarily precipitation. There's a--it's a  
4 very large drainage area. There's quite a few feeder creeks  
5 that come in. There are wetland--large wetland areas that  
6 feed this creek system.

7           There can be times at various times of the year  
8 due to temperatures that dissolved oxygen can be low.  
9 There's places where if there's not a lot of--if there's not  
10 a lot of input for fresh water in some of these feeder  
11 creeks, it can sit there and go stagnant. The temperature  
12 can affect the dissolved oxygen, drive dissolved oxygen out  
13 of the water.

14           Q     What about the lay of the land as it relates to  
15 the waters in that area? Are there turns? Is it pretty  
16 straight? Is it--describe for the Court---

17           A     (interposing) There's areas of the creek that  
18 look entirely natural. They have sinuosity, meaning that  
19 they wind and they curve and they bend. And then there's  
20 areas where it appears that there might have been some  
21 man-made changes to the creek where they're straightened, you  
22 know, dug out and straightened. There's areas where the  
23 creek is just straight as an arrow, and then there's other  
24 areas where it's meandering and has a sinuosity to it.

25           Q     If you will, are you aware that on or about

1 September the 10th, 2009, a call was made to DWQ as it  
2 relates to a possible discharge?

3 A We received a complaint September 9th. It was  
4 late in the afternoon about 4:00--late, 4:50 or so. And the  
5 complaint said that there was a--there was something in the  
6 creek at both the Sheffield and the Beaverdam--I'm sorry, the  
7 Sheffield and Brooks Quinn Beaverdam Branch crossings. They  
8 indicated that there was a foul smell.

9 Q Is it unusual or out of the ordinary to receive  
10 anonymous calls?

11 A No. No, it's not out of the ordinary.

12 Q And so as a result of having received that call,  
13 what, if anything, did you do?

14 A When we received the call that evening, it was too  
15 late to go out. We generally don't go out in the field that  
16 late in the evening for safety reasons. Geoff Kegley and--I  
17 went to Charlie Stehman to--Charlie Stehman is the aquifer  
18 protection supervisor--and asked Charlie if I could get one  
19 of his staff to go in the area with me to conduct this  
20 inspection.

21 I wanted someone from Aquifer Protection with me  
22 because there were two hog farms in the area and also the  
23 House of Raeford that I had not visited on the previous  
24 complaint. It was the only facility I did not go to in---

25 Q (interposing) Oh, I thought you said you did go

1 to House of Raeford.

2 A Not in March. When the fish kill--in the fish  
3 kill complaint in March, I went to all the facilities in the  
4 area except for--House of Raeford was the only facility that  
5 I did not go to.

6 Q How come you didn't go to the House of Raeford?

7 A I reported what we had seen, you know, that we  
8 were seeing something going on at the--in Beaverdam at the  
9 Brooks Quinn Road. House of Raeford has a wastewater  
10 treatment facility that Aquifer Protection is the compliance  
11 section responsible for them.

12 And I had--I knew there were other facilities in  
13 the area that were in my area for compliance. And so I was  
14 going to focus on my facilities and I just reported to  
15 Aquifer Protection that we had this situation and referenced  
16 House of Raeford for, you know, a potential inspection as  
17 well. So I went to the other facilities since they were, you  
18 know, facilities that are--facilities that I would have  
19 compliance for anyway.

20 Q So the inference being that you don't have any  
21 compliance for House of Raeford?

22 A Well, they did have an NC General 500000 permit,  
23 but I know what boiler blowdown looks like. And I've never  
24 had a problem--never seen a problem with boiler blowdown  
25 discharge suppressing dissolved oxygen in stream.

1           Q     Okay. So if you'll continue with what occurred on  
2 or about September 9th, 2009?

3           A     Geoff and I got in the vehicle and we loaded up  
4 the vehicle with our--of course we calibrate our meter, take  
5 our dissolved oxygen meter, pH meter.

6           Q     Okay. Let me just stop you. Was that meter  
7 calibrated before you took it out?

8           A     Yes.

9           Q     And how do you know?

10          A     I calibrated the meter. So we calibrate the  
11 meter. We calibrate the meter before we leave so that--you  
12 could calibrate it out in the field, but if you find that you  
13 have a problem with the meter, then you'd have to drive all  
14 the way back to the office and get another meter. So it's  
15 better to calibrate the meters before you leave so you know  
16 that your meters are operable. It saves time and--you know,  
17 if for some reason the meter's not working.

18                   We, of course, have to get our safety gear  
19 together. And we drove to Duplin County. We went to Rose  
20 Hill, went through Rose Hill. We came up 117. We traveled  
21 north on 117 into Rose Hill. And we went directly to--the  
22 first location we went to was where Beaverdam Branch crosses  
23 Brooks Quinn Road.

24          Q     Why did you go there?

25          A     That was one of the locations that the complainant

1 said there was a problem in the stream. So we started there.  
2 That was the furthest downstream location between the two.  
3 Sheffield is upstream and Brooks Quinn Road crossing over  
4 Beaverdam would be the downstream--furthest downstream  
5 location where the complainant had identified problems. And  
6 we started at the furthest location downstream.

7           We took--you couldn't see anything on the surface  
8 of the water. We looked for things that are out of the  
9 ordinary for surface waters. We'll look for things like  
10 turbidity. We look for any kind of floating material that  
11 might be in the creek. We look for--we pay attention to  
12 things like odors. We look for distressed fish or aquatic  
13 life. We look for things like excessive, you know, growth of  
14 vegetation.

15           And then we also use our meter to measure dis-  
16 solved oxygen. This meter also has a capability of measuring  
17 conductivity, percent dissolved oxygen saturation--DO  
18 conductivity, percent saturation, and salinity. And the pH  
19 meter is a different meter that only measures pH.

20           Q     And so what did you do after you went to that  
21 specific location?

22           A     The next location we went to--we drove from  
23 the--because we came in heading north on Brooks Quinn Road,  
24 we drove around to the next--I already knew what the creek  
25 system looked like in that area because of my--because I

1 spent so much time in March in that area due to the complaint  
2 that came in in March and conducting the inspections in that  
3 area. We went around to the unnamed tributary that comes  
4 into Beaverdam Branch from Johnson Parker Road.

5 Q So are you working your way upstream?

6 A We're working our way upstream, yes.

7 Q And what did you---

8 A (interposing) And we just happened to be facing  
9 that direction anyway when we drove up to the Brooks Quinn.  
10 Rather than turning around and go in another direction, we  
11 just continued around Brooks Quinn. You can get to the  
12 Johnson Parker Road location. I knew there was an unnamed  
13 tributary that came in there.

14 So what we were looking at was if we knew we had a  
15 problem at a downstream location, we're going to try to hit  
16 all the upstream locations to try to determine where is this  
17 problem--where has this problem begun. When we went to the  
18 Brooks Quinn bridge crossing, you could see a film, a brown  
19 film. It looked like a biomass, sludgy, like greasy brown  
20 material floating all over the surface of the water.

21 Q Okay. So you used the word "sludgy," and--so it  
22 was brown and sludgy. What does that--did that mean anything  
23 to you?

24 A It indicated a wastewater. I mean it appeared to  
25 me that it was wastewater related. It was--the wastes that

1 we've seen can have this appearance. I mean it's--we've been  
2 to wastewater treatment plants, for instance, that have  
3 sludge. They generate sludge. They all generate sludge.  
4 And it's kind of a--it's that same color.

5           It can be--basically, the color is what indicated  
6 that it was a waste--something not natural. It was not  
7 natural. It was organic in composition, or it looked  
8 organicy. And it was floating.

9           Q     At that location could you--did you have any  
10 guesses as to the cause?

11          A     No.

12          Q     So then what did you do?

13          A     So the next location we went to was the Johnson  
14 Parker Road. It's the--there's a small unnamed tributary  
15 that comes into Beaverdam Branch, but it crosses Johnson  
16 Parker Road. We took dissolved oxygen readings there. We  
17 took percent saturation, salinity, conductivity, pH. The DO  
18 was very low there. I think it was in the range of .2.

19                So I knew there was two hog farms. Before we left  
20 the office, I had pulled up a map to see what else was in the  
21 area there. I knew which industries we had in the area, but  
22 I was looking specifically for things like hog farms, some-  
23 thing that I wouldn't typically be involved in doing  
24 compliance for. So I looked for any sources of what--any  
25 sources that could contribute to a problem in the surface

1 waters at that Brooks Quinn location.

2 Q Now, you said that's not typically something you  
3 would be looking for as far as compliance, but that is some-  
4 thing that Geoff Kegley would be looking to as far as  
5 compliance; is that correct?

6 A The Aquifer Protection Section has--I'm not sure  
7 how many staff they have, maybe three or four staff, that is  
8 responsible for inspecting the hog farms.

9 Q But that is something within the purview of  
10 Aquifer Protection, is it not?

11 A Yes. Yes.

12 Q And you skipped--you didn't--I wasn't sure if you  
13 indicated that you took a DO, pH readings at that earlier  
14 site.

15 A I did.

16 Q Okay.

17 A Yes. At Brooks Quinn Road where Beaverdam crosses  
18 Brooks Quinn we--that's why we knew that--between that and  
19 what was floating on the surface of the water, we knew we had  
20 something--we had a foreign material still in the water. So  
21 when we went to the location at Johnson Parker Road, though,  
22 there was nothing floating on the surface of the water. The  
23 water was clear.

24 Q Even though there was a low DO?

25 A Yes, even though it was a low DO. There was

1 nothing--this material we saw floating on the surface of the  
2 water at the Brooks Quinn location was not at Johnson Parker  
3 Road crossing for that UT. There was nothing floating on the  
4 surface of the water there at all, but there was a very low  
5 DO. So we--Geoff and I rode next to two hog farms that are  
6 adjacent to that tributary.

7 Q Are they very big facilities, if you know?

8 A Well, I don't know how to really judge big---

9 Q (interposing) Okay.

10 A ---for hog farms. I don't know how to judge.  
11 They both had lagoons. And so we inspected the lagoons to  
12 look for any signs of overtopping, you know, or, you know,  
13 waste in the creek.

14 Actually, right next to those facilities they have  
15 ditches that are located close to the lagoons, but the  
16 ditches were actually dry. So we were quite confident that  
17 had there been any problem with the hog farms, we would have  
18 seen something in the ditch. But the ditches were dry. This  
19 was a--we were kind of coming out of a drought period. We  
20 hadn't had a lot of rain, and those ditches in particular had  
21 no standing water in them.

22 Q Okay. And so then what did you do?

23 A So we--of course we could cross the hog farms off  
24 our list as--we talked to the operator, of course. We  
25 visited with the operator, of course asked him if he was

1 having any problems, asked him if we could inspect the  
2 lagoons. And he was very gracious in letting us--he said,  
3 "Go see whatever you want to see. We have had no problems  
4 here."

5           It was obvious that he was maintaining adequate  
6 freeboard. There was no problems, no signs, no evidence of  
7 any breach in the dike wall. There was no evidence that  
8 there had been any pumping to the ditches that would have  
9 been conveyances for wastewater into that unnamed tributary  
10 that crosses Johnson Parker Road.

11           Q     And no evidence of the sludge there either;  
12 correct?

13           A     No. No. There was nothing in the water, nothing  
14 standing--nothing floating on the surface of the water  
15 whatsoever. We just--we had a depressed dissolved oxygen.  
16 But this was--it was also--one of the things that we noted as  
17 well is that there was absolutely no flow in that little UT.  
18 It's in--typically there isn't much in the way of flow to  
19 that little unnamed tributary.

20           It appeared to be kind of a deeper--maybe it might  
21 have been dredged out in the past to allow for better  
22 drainage in the area. But it didn't have any flow, and it  
23 could have been just the fact that the water had been  
24 standing there and there hadn't been significant rains to  
25 contribute oxygen to the water.

1           Q     Now, you say that there had not been significant  
2 rain. Do you know if rain would have been expected in the  
3 area? I know you said you were coming out of a drought.

4           A     Rain was expected in the area. There was fore-  
5 casts of heavy rain showers, but when the rain showers came,  
6 they didn't come through Duplin County. They actually more  
7 skirted the coastal area, so we didn't get rain.

8           Q     Okay. So explain to the Court what happened after  
9 that.

10          A     Well, then we traveled down to--we followed---

11                   The Court:                   (interposing) Before you do  
12 that, why don't we take a five minute break?

13                   The Reporter:           Off the record.           11:43 a.m.

14                                   (A brief recess was taken.)

15                   The Reporter:           On the record.           11:51 a.m.

16                   The Court:                   This hearing will come to  
17 order. It's now 11:50 on November the 30th, 2011. All  
18 parties present when we recessed are again present. Ms.  
19 LeVeaux.

20                   Ms. LeVeaux:                   Thank you, Your Honor.

21                   By Ms. LeVeaux:

22           Q     Ms. Willis, you explained that you were doing your  
23 investigation on or about September the 10th, 2009. I  
24 believe you were heading to the third site; is that correct?

25           A     Yes.

1           Q     And if you will explain to the Court what you did  
2 and where you were going?

3           A     From the location off Johnson Parker Road, after  
4 we visited the two hog farms and did not see any evidence of  
5 any type of discharge or any wastewater from the hog lagoons  
6 into that unnamed tributary--and by the way, hog waste does  
7 have a color to it which is different than what you would see  
8 at a--say the House of Raeford wastewater lagoons or Carolina  
9 By-Products wastewater lagoons or Duplin Winery's wastewater  
10 lagoon. It's more of a pink--it's kind of a pink, rosy  
11 color. And you can actually see the hog waste in stream when  
12 you have a discharge of--a significant discharge of hog  
13 waste.

14                     We traveled on to the Sheffield Road crossing.  
15 And the Sheffield--it's a--Sheffield Road crosses Beaverdam  
16 Branch just downstream of the House of Raeford facility. And  
17 we again saw the floating brown, sludge-type material, a thin  
18 layer of this brown and greasy looking biomass on the surface  
19 of the water.

20                     And we also took our stream readings. We took  
21 dissolved oxygen and percent saturation, temperature,  
22 salinity, took a pH reading and found that dissolved oxygen  
23 was very low at that location. There was material that was  
24 also trapped in the vegetation in and around the Sheffield  
25 Road bridge. This sludgy material was also trapped in

1 vegetation along the creek banks at that location. So it was  
2 a definite confirmation that whatever this material was had--  
3 we needed to continue to go upstream to see if we could find  
4 where the source was.

5           We also--and I didn't tell you. We took samples  
6 when we were at the Brooks Quinn Road crossing for Beaverdam  
7 and we also collected samples at the Sheffield Road crossing.

8           Q     And when you take a sample, tell me what you do.

9           A     We took samples for--well, depending on what  
10 you're sampling for, you have the appropriate sampling  
11 containers for fecal coliform. It's a--it's--we already have  
12 preservatives in those bottles. In some of the other samples  
13 that we may take, we may have to put preservative into the  
14 sample bottle. We collected BOD, fecal coliform. I have to  
15 look at my notes, but I think we pulled TSS.

16           But basically we have sampling wands that you can  
17 fit the bottles into the sampling wand. And you turn the  
18 container into the water and basically just dip a sample from  
19 the surface waters.

20           Q     So it's not difficult to take a sample, is it?

21           A     No. No.

22           Q     Then what did you do?

23           A     We then traveled to the Cabin Branch, the next  
24 upstream location that we went to. We were on Sheffield  
25 Road. Sheffield comes out when--the direction we were

1 driving on Sheffield was basically going I guess south or  
2 south and east. And it ends up intersecting Brooks Quinn.

3           So we turned right onto Brooks Quinn and went to  
4 the next location, which was where Cabin Branch crosses  
5 Brooks Quinn, and that would be considered an upstream  
6 location from the Sheffield Road. It's in a different--it's  
7 in Cabin Branch rather than Beaverdam, but Cabin Branch feeds  
8 into Beaverdam Branch in just about the location of Sheffield  
9 Road right there at the Sheffield Road Beaverdam Branch  
10 crossing.

11           If you look at the maps that define the creeks,  
12 Cabin Branch intersects into Beaverdam Branch in about--in  
13 around the Sheffield--just upstream of the Sheffield Road  
14 crossing. And from that point, from basically Sheffield Road  
15 crossing on where Cabin Branch comes in, it then takes the  
16 name of Beaverdam Branch. So it doesn't--you know, it's  
17 Cabin Branch where it feeds into Beaverdam. Where it feeds  
18 into Beaverdam from there downstream, it's Beaverdam Branch.

19           Q     Same stream, different names?

20           A     It's--well, Cabin Branch is a tributary to  
21 Beaverdam Branch.

22           Q     Right.

23           A     Okay. So at the Brooks Quinn crossing, this is  
24 where Cabin Branch crosses Brooks Quinn Road. It is directly  
25 upstream of the House of Raeford facility. At that location

1 there was absolutely no material floating in the water at  
2 all. We also took our---

3 Q (interposing) So you were upstream of House of  
4 Raeford?

5 A We were upstream, yes. We were upstream--on Cabin  
6 Branch upstream of House of Raeford. There was no--there was  
7 no material floating in the water there. There was no--none  
8 of this brown floating material in the water. There was  
9 nothing in the vegetation. We--it appeared--it did not  
10 appear to be impacted.

11 We did take our readings with the dissolved oxygen  
12 meter. The dissolved oxygen at that point was 4 point  
13 something, 4.7, 4.9, but it was high and definitely in normal  
14 range for what this creek system would be expected to have.

15 Q What's normal for that creek system?

16 A Well, it can vary, but basically for--this is a  
17 Class C-Sw classified water. Sw stands for swamp waters. It  
18 means that the Class C water is fed by wetland areas, low  
19 areas. And for a Class C-Sw classified water, the dissolved  
20 oxygen standard is 4.

21 It can be lower depending on conditions. There  
22 are times when the conditions can be lower, but you can  
23 expect--and our water quality standard for that classifica-  
24 tion of water is 4. And it was above 4. It was at about 4.7  
25 or 4.9.

1           Q     So as a result of what you discovered there, what  
2 did you do?

3           A     Well, that told me that there was nothing--there  
4 was no pollutant of concern at that particular point in this  
5 creek system. I knew what--I knew all the feeder creeks that  
6 come in. I know where Beaverdam Branch comes in. I know  
7 where the unnamed tributaries are to Beaverdam Branch.

8                     And there was one other--or we had not looked at  
9 the Beaverdam Branch location--the Beaverdam Branch crossing  
10 on Highway 117. And there's another unnamed tributary that  
11 comes in between Highway--where Beaverdam Branch crosses  
12 Highway 117, which would be to the east of the Sheffield  
13 Road--Beaverdam Branch Sheffield Road crossing. There's  
14 another unnamed tributary that comes in in between  
15 Highway 117 Beaverdam Branch and Sheffield Road. And there's  
16 two locations you can access that unnamed tributary. One is  
17 by Highway 117, and the other location would be directly  
18 adjacent to the Parker Bark facility.

19                     So we--after--we left the upstream location on  
20 Cabin Branch on Brooks Quinn Road and drove--came out to--  
21 drove to Highway 117, drove north on Highway 117. We passed  
22 over the Beaverdam Branch crossing on Highway 117, which is  
23 basically right adjacent to the House of Raeford facility.

24                     And this location had--was very choked in weeds.  
25 It's a--I'm not sure if I know--I think it's called an

1 alligator weed, but it's a weed that grows from the bottom.  
2 And it was real dense vegetation in that area. So the water  
3 was standing still there and there was also no evidence of  
4 any sludge material in that--at that location.

5           We did not take dissolved oxygen readings there  
6 because typically that's not a good place to try to take  
7 dissolved oxygen when it's so choked with the aquatic  
8 vegetation. It's actually hard to get your DO probe through  
9 that vegetation far enough to get it into the water to take  
10 readings.

11           But we knew what we were dealing with was a  
12 floating waste because we saw it at two locations in  
13 Beaverdam Branch but had not seen that same floating  
14 pollutant in the upstream location at Cabin Branch. So one  
15 of the things of course we're going to be looking for is  
16 floating material in the creek.

17           We drove up to the Highway 117 Beaverdam--it's an  
18 unnamed tributary that comes into Beaverdam Branch. It's a  
19 little unnamed tributary, crosses Highway 117. We took  
20 dissolved oxygen readings there, and that was--it was normal.  
21 I mean it was probably in the range of--the 3 range. I'd  
22 have to look at my notes to tell you exactly what the DO  
23 readings were.

24           But again, we didn't see any kind of floating  
25 waste in the creek there. There was nothing in the

1 vegetation. And actually, this location--it looks actually  
2 more like a ditch at this point. This unnamed tributary  
3 looks kind of like a ditch right there.

4           There has been times--and I've become a lot more  
5 familiar with the creek system since this incident because we  
6 incorporated this area into a--we were required to conduct a  
7 stream study. Each region in the state was tasked with doing  
8 a stream study, pick an area, a stream system, that was  
9 impaired and try to resolve the impairment issues around that  
10 stream system. So we've basically--because of the problems  
11 in this creek, we adopted that creek as our stream study.  
12 And so we--I have spent a lot of time in that area since then  
13 pulling samples for our stream study.

14           But this location, the unnamed tributary where it  
15 crosses Highway 117, there has been several occasions where  
16 there has actually been no flow at all there. And so it's  
17 another small feeder that's really driven by rain events.

18           So we didn't see any indication of any problems at  
19 that, and so we knew whatever had happened in this creek had  
20 to have happened between Cabin Branch at the Brooks Quinn  
21 Road crossing and the Beaverdam Branch location at Sheffield  
22 Road. And there's only two facilities in between these two  
23 areas. One is the House of Raeford chicken slaughterhouse  
24 and the other one is Parker Bark.

25           I had been working with Parker Bark. Due to the

1 complaint that we got back in March of '09, I began working  
2 with Parker Bark for them to obtain their permit for storm-  
3 water runoff from their site. I called Mr. Parker that day  
4 to request permission to come onto site to view the creek  
5 behind his facility. I knew Cabin Branch came in behind his  
6 plant, his facility. And he would not give me permission to  
7 come onto site. He was on his way to Raleigh. His wife had  
8 a doctor's appointment.

9           And so the only other access I would have to Cabin  
10 Branch facility-wise would be House of Raeford, so we drove  
11 then to the House of Raeford facility and requested  
12 permission to come on site. We asked for the operator, so  
13 Joe Teachey met us and escorted us.

14           When he met us, we asked him--we told him that we  
15 had a complaint, that there was a complaint about something  
16 in the creek at the Beaverdam--in Beaverdam Branch at Brooks  
17 Quinn and Sheffield Road and that we needed to see--we would  
18 like to see the creek, view the creek behind the facility.

19           And so Joe escorted us. I don't know how long it  
20 took him. It took him a little while to meet us at the front  
21 gate, but we had signed in. And he escorted us to--there's a  
22 road that drives--that you can drive around the lagoons. And  
23 we came in on the--drove in from the south side of the  
24 lagoon.

25           And we got out of the vehicle, and Geoff and I

1 walked along--there's a ditch that runs right adjacent to the  
2 lagoon system, to these two oblong lagoons, the primary and  
3 the secondary lagoon. There's a ditch that runs just  
4 adjacent to it, and that's to the south of the two lagoons.

5           We--Geoff had noticed something in the ditch that  
6 didn't appear natural, but didn't know what to make of it.  
7 We followed the ditch where this adjacent ditch comes into--  
8 it actually feeds or dead-ends right into Cabin Branch.

9           When we walked back to Cabin Branch, we came  
10 around the end of the secondary lagoon, and when we walked  
11 back to actually view the creek, you could see the sludge  
12 just laying in the creek.

13           It was probably the most--I've never seen anything  
14 like that in my life as far as--I mean the creek was just  
15 full of sludge from bank to bank and as far as the eye could  
16 see. It was an unbelievable sight. So I'm standing there  
17 flabbergasted for a while, like "Oh, my gosh." It appeared  
18 to be very thick. The sludge standing in the creek was very  
19 thick. It even had---

20           Q       (interposing) Describe it for the Court. I mean  
21 you indicated that down the way you saw a brown, greasy  
22 sludge, so---

23           A       (interposing) Right.

24           Q       ---distinguish if you can or if you need to  
25 distinguish what you saw earlier from what you saw at this

1 juncture behind the lagoon.

2           A       The sludge in the creek right behind the lagoon  
3 was a--it was kind of light--kind light brownish-tannish--it  
4 looked to me like a fresh--what I would call a fresh sludge.  
5 It was very fresh looking.

6                    It didn't have an odor. It hadn't--it hadn't  
7 formed any kind of like even a black crust. As sludge gets  
8 older, it--when it decomposes, it actually starts to turn  
9 black. It goes from a--it almost looks like a milkshake. It  
10 starts out looking like a milkshake and then as it  
11 decomposes, it gets--because of the septicity--what's  
12 happening is there's not a lot--there's not oxygen in this  
13 wastewater other than what might be entrained in the waste-  
14 water from the actual generation of that sludge in the waste-  
15 water treatment process.

16                   And as a matter of fact, we did measure the  
17 dissolved oxygen in the creek right where the sludge was. I  
18 had to feed the probe down through the layer--standing layer  
19 of sludge, get it down into the creek. And you move the  
20 dissolved oxygen probe and it reads the dissolved oxygen.  
21 And there was actually about 2 milligrams per liter dissolved  
22 oxygen at that point.

23           Q       So there is water under this---

24           A       There's water under this sludge. There is.  
25 There's--of course the creek is underneath that bed of

1 sludge. It would be hard to put a figure to maybe how thick  
2 the sludge is because it may be--could be thicker actually  
3 out in the center more than what it was at the shoreline.  
4 But it was actually so thick at the shoreline it was--it just  
5 looked like it had--it was just--almost like flowed up onto  
6 the shore, the shoreline itself.

7 Q Was it sticking to the shoreline?

8 A Yes. Yeah, it was adhering to the shoreline. It  
9 was all under the--it was coated--I mean everything in the  
10 creek was just full of this sludge. There was not one  
11 portion of the creek that you could see the creek itself  
12 because of this sludge.

13 Q So--I'm sorry.

14 A So--and so you asked me what--the difference  
15 between the color downstream and the color upstream. The  
16 color upstream looked to me like it was--that was the point  
17 where it was going to be the freshest. It was the--what we  
18 had determined was this is the point of origin where this  
19 sludge had met the creek. This is the first point that the  
20 sludge has been introduced to this creek.

21 It was very fresh looking. It was--the sludge  
22 itself was standing, you know, thick on the surface of the  
23 water. It was--in some cases it had like ridges. There was  
24 ridges in it just--which kind of speaks to how thick the  
25 sludge was. It was very thick sludge.

1           Further downstream it was a little bit darker in  
2 appearance and it was--of course the mat of sludge wasn't  
3 near as thick. It was a lot thinner, so what I would  
4 describe would be it was probably sludge that had--was inter-  
5 mixing as--and there wasn't much flow in the creek, if any.

6           As a matter of fact, you couldn't really tell if  
7 there was any flow in the creek because you couldn't even see  
8 the creek at the point right there behind House of Raeford.  
9 But it was obvious something had allowed it to move--some of  
10 this material to begin moving downstream because we saw the--  
11 we saw some of this wastewater slick downstream.

12           Q       Before you go downstream, tell me--you said you  
13 saw it at that juncture. Tell me if you went upstream at  
14 all.

15           A       I did go upstream, walked upstream to one of  
16 the--of course we were trying to figure out where the point  
17 of entry actually was for this sludge material because we had  
18 a good indicator, which was of course the visual, this  
19 standing sludge. We walked upstream to look for--if there  
20 could be any sludge coming from upstream, you know, I mean  
21 adjacent to the property right next to House of Raeford.

22                   There was nothing in the water. And just upstream  
23 basically of this ditch, this adjacent ditch that runs on the  
24 south side of their lagoon system, there was nothing in the  
25 water just south of that, which would be upstream.

1 Q So---

2 A (interposing) The water was clear. It actually  
3 had a nice reflection. There was no oily, greasy material.  
4 There was no--there was no brown sludge. There was nothing  
5 in the vegetation. There wasn't anything standing in the  
6 water. There was no evidence of any intermixed wastewater.  
7 The water was not turbid. It was clear. It was clear water.

8 Q So then what did you do?

9 A Well, we asked---

10 Q (interposing) Well, Joe Teachey was with you---

11 A (interposing) Right.

12 Q ---the operator in charge; correct?

13 A Right, right. We---

14 Q (interposing) What did he say?

15 A He asked him if he had any idea where this  
16 material came from, and his--the best explanation he had was  
17 that---

18 Mr. Jones: (interposing) Objection,  
19 hearsay.

20 The Court: It's overruled.

21 A That the---

22 The Court: (interposing) I'll take it for  
23 the motivating factors for her rather than the truth of the  
24 matter. You can continue.

25 A He pointed out that the neighbors had cows and

1 that he didn't want to point fingers, but that the neighbors  
2 upstream had some livestock, had some cows. Of course we  
3 knew there was no way in the world that this was--this was  
4 cow waste. We were looking at a wastewater sludge.

5 Q Did you tell him that you had walked upstream?  
6 What did you tell him when he said the neighbors had--what  
7 did you say, if you can recall?

8 A Well, I'm--I can't really recall what I said, but  
9 I'm certain it was pretty much to the tune of "Bunk." I mean  
10 there's no way. I know what I'm looking at here. This is  
11 not--I know what it's not coming from. It is not coming from  
12 cows. This is not something you'd see, you know, from live-  
13 stock. This was a--it was a processed--it was a processed  
14 sludge. It was a wastewater sludge. That's exactly what it  
15 looked like was a wastewater sludge.

16 Q Did it look like anything else you had seen  
17 before?

18 A Yeah. House of Raeford has a primary lagoon, has  
19 the very identical looking material sitting in it. It looks  
20 the same, identical.

21 Q And what about Parker Bark?

22 A Parker Bark does not generate a wastewater sludge.  
23 They don't generate a wastewater. The only thing Parker Bark  
24 generates is stormwater runoff. They don't generate a waste-  
25 water.

1           And the other compelling thing about this is  
2 that--I keep mentioning fresh, and it's hard for--it's hard  
3 to explain what fresh really means in the world of waste-  
4 water. But when you have experience with wastewater  
5 treatment plants and you--I've looked at a lot of sludge.  
6 I've inspected a lot of wastewater treatment plants. I've  
7 inspected them over and over and over. I have looked into  
8 their--the wastewater treatment plants can generate a sludge.

9           And what a sludge is, it's actually--it's a waste,  
10 a by-product of the wastewater treatment system. And what--  
11 the purpose of the generation of a sludge is to waste out  
12 solids out of the wastewater treatment system. If you don't  
13 waste--sludge is what you waste out of a wastewater treatment  
14 plant.

15           So when you have raw wastewater coming in and it's  
16 coming into an aeration basin, aeration basins are designed  
17 to treat a certain amount of biological oxygen demand, which  
18 is--we call it BOD, and a certain amount of ammonia. And for  
19 wastewater treatment plants, domestic wastewater treatment  
20 plants, the BOD--these pollutants like BOD and ammonia are  
21 pretty consistent for human waste.

22           They--the plants are built so that the BOD is  
23 consumed by the microorganisms that you grow in the aeration  
24 basin. But these microorganisms can only handle--in the  
25 process of building the microorganisms, you're building what

1 we call a mixed liquor, suspended solids, which are the  
2 solids--basically, they're the bacteria themselves

3 --could be old. Bacteria can--they reproduce and they  
4 die very quickly. So when bacteria die, you get basically  
5 more or less the bug--the microorganism cells. They call  
6 them bug bones for a better term.

7 The solids have to be taken out of any wastewater,  
8 especially for a surface water treatment system. If it's  
9 going to be discharged to surface waters, you have to take  
10 the solids out because solids are one of the pollutants that  
11 have to be taken out of the stream before you can put it into  
12 surface waters.

13 Most of the--most of our permits--permit limits  
14 for total suspended solids in a discharge is 30 milligrams  
15 per liter of solids per day--or excuse me; 45 per day and 30  
16 monthly average. So you have to--you have to waste some of  
17 the solids out of the treatment process in order for the  
18 treatment system to actually work as it's designed.

19 So the material that you waste out of a treatment  
20 system for domestic wastewater treatment plants are--they're  
21 shipped off site and can be land applied. Most solids are  
22 going to be land applied for a surface discharge system.

23 For a plant such as House of Raeford, they can  
24 remove solids out of the system using their DAF unit. And  
25 you can--they take those solids out and send them to a

1 rendering plant rather than land apply them. And it's  
2 because it's full of oil and grease.

3           With a wastewater treatment plant sludge if you  
4 left the sludge alone in a basin and you did not aerate it  
5 and you did not mix it, that sludge--the sludge actually will  
6 settle out. It sinks. And that's--and so they build a  
7 sludge holding basin that is meant to consolidate the solids,  
8 keep concentrating solids. They'll waste sludge into this  
9 basin to concentrate the solids.

10           And they concentrate it and concentrate the solids  
11 and they allow--they'll shut off mixers and they'll shut off  
12 the aerators to this sludge holding basin to allow the solids  
13 to settle down. And then what you get is a clear liquid,  
14 maybe not so clear, but, you know, a liquid will form on the  
15 surface. And they decant the liquid off the top to make more  
16 room to be able to waste back into that sludge holding basin  
17 again.

18           So with a domestic wastewater you're not--you  
19 actually would get a--if you had a--if that sludge were from  
20 a domestic wastewater treatment plant, I would have expected  
21 that sludge with no kind of mixing or no kind of aeration,  
22 that that would have--that would have settled out.

23           This was a floating sludge. And the facilities--  
24 the only facilities in the area that generate a wastewater  
25 that has a floating sludge like that that can stay floating

1 without mixing it or aerating it to keep it, you know, at the  
2 surface is Carolina By-Products and House of Raeford. And it  
3 floats because it's entrained with oil and grease. And oil  
4 and grease is lighter than water, so it floats.

5           And so we knew that this--I mean we could  
6 eliminate--between the fact that we--another thing about  
7 wastewater is if you introduce a wastewater to a surface  
8 water, it leaves a fingerprint.

9           As it moves downstream, it doesn't move in a--what  
10 we call a plug flow fashion where you introduce a wastewater  
11 into a stream. It doesn't just neatly all stick together in  
12 one plug and just go downstream and leave a clean water  
13 behind it. It leaves a fingerprint. From the point that  
14 it's introduced into a surface water and it's moving down-  
15 stream, it leaves a fingerprint all along the way.

16           And it impacts--you'll see it in the form of maybe  
17 elevated TSS, turbidity. You'll see it in the form of, in  
18 this case, a sludge or a slick in the water. Even if--as the  
19 waste decomposes--if it's in the water long enough, it will  
20 decompose and it will turn septic. And then at that point it  
21 will sink, and that's what we saw.

22           As a matter of fact, when--I had the opportunity  
23 to talk to Clay Howard because we eventually--I had asked Joe  
24 Teachey when we were on site--I said, "Does your super-  
25 visor"--"Have you noticed this in the creek before?" And he

1 said, "No, I hadn't seen it in the creek."

2 I don't know how he missed it. You couldn't miss  
3 it sitting out there in the creek because you have an--they  
4 have an open view at the end of their lagoons on the north  
5 side where the creek is completely open to the top of the  
6 dike wall. You can stand right on the top of the dike wall  
7 and see a clear view of the creek.

8 We asked Joe how many times he had even traveled  
9 around his lagoon, and he indicated that he had been--he  
10 travels around his lagoon several times a day. And we asked  
11 him why he didn't see the material in the creek, and he  
12 didn't--he just said he didn't see the sludge in the creek.

13 By this time--and it was getting later in the day,  
14 so I asked Joe to talk to his--I asked him if he would talk  
15 to his supervisor about what was--you know, the condition in  
16 the creek, the fact that there was sludge in the creek. And  
17 later on when we came back, Clay Howard had walked to the  
18 back of the lagoon with us because he wanted to see what this  
19 looked like. And the---

20 Q (interposing) Well, wait a minute; when you came  
21 back that same day on the 10th?

22 A No. We came back on the 15th.

23 Q Well, don't take me to the 15th yet.

24 A Okay.

25 Q So you're still--this is still the September the

1 10th, 2009, and it's just you and Mr. Kegley and Mr. Teachey;  
2 correct?

3 A Right.

4 Q And so it was getting late in the day. What did  
5 you do after that? You told him to talk with the supervisor,  
6 but anything else?

7 A Well, I knew we were coming back. I knew we'd  
8 be--I knew we were going to come back to the site again. And  
9 so I wanted him to relay the information, you know, that we  
10 were there, why we were there, what was--you know, what we  
11 had found in the creek. I wanted him to make sure he  
12 notified his supervisor.

13 And Geoff and I had to get back to the lab because  
14 we had taken fecal coliform samples and they do have a hold  
15 time, so we wanted to get them back. If you get back too  
16 late at the lab, they can charge you for their overtime. It  
17 holds their employees over to have to run the samples after  
18 hours. And so---

19 Q (interposing) Because fecal has a time limit?  
20 Does fecal have a time limit?

21 A It has a hold time, yes, of six hours.

22 Q So you did go back at that juncture; correct?

23 A We did, yes.

24 Q And then did you go out the next day?

25 A I came back the next day and I brought Kip Glazier

1 with me. And Kip and I--I took Kip to the creek. Of course  
2 we signed in at House of Raeford or, you know, went to the  
3 front gate. That's how you get in is at the front gate.

4           And Joe met us again and took us back to the  
5 creek, and so Kip Glazier viewed what was in the creek as  
6 well. And I took him to the other locations and snapped some  
7 pictures of what we saw.

8           And the conditions hadn't changed from the 10th to  
9 the 11th. There was still a standing mat of brown sludge at  
10 the downstream locations at both the Brooks Quinn and the  
11 Sheffield Road crossings. And there was no evidence, again,  
12 of course, at the Cabin Branch Brooks Quinn crossing. And we  
13 still had the floating mat of sludge that was still standing  
14 behind the House of Raeford facility.

15           Q     Let me stop you for a minute, and I just want to  
16 take you back for a minute to September the 10th, 2009 when  
17 you and Mr. Kegley were out at House of Raeford. Did you  
18 have an occasion--you said you looked at the ditch. Did you  
19 have an occasion to look at the lagoons?

20           A     We did.

21           Q     Could you describe for the Court the lagoons--or  
22 the condition of the lagoons as you observed them on that  
23 date?

24           A     The primary lagoon is the first lagoon that's  
25 closest to the facility. It's the lagoon that's furthest

1 east--excuse me, west--and closest to the House of Raeford  
2 processing plant. It was covered completely--well, not  
3 completely. It had a tremendous amount of vegetation, large  
4 green, tall green grass. I guess it's not a grass. I'm not  
5 sure what vegetation it is, but it was a tall green vegeta-  
6 tion growing in the lagoons.

7           There were some areas where you could see the  
8 surface of the lagoon. And in the areas where you could see  
9 the surface of the lagoon, there was the same sludge standing  
10 in the lagoon in those open areas that didn't have--that  
11 weren't choked out with vegetation.

12           Q     And it was that area that looked like what you saw  
13 in the---

14           A     The sludge looked the same. The sludge looked  
15 like what was in Cabin Branch right behind their facility.

16           Q     And what about the secondary lagoon?

17           A     The secondary lagoon had no standing sludge on it.  
18 There was no--there's no vegetation in that lagoon. That  
19 lagoon is all--basically all wastewater and didn't appear to  
20 have, you know, any standing sludge whatsoever in it.

21           Q     In fact that's the--that water--that wastewater  
22 goes to the spray fields about 2 miles away; is that correct?

23           A     My understanding is that that wastewater is then  
24 pumped to a storage lagoon. And then from the storage lagoon  
25 they land apply or spray irrigate that wastewater onto fields

1 from the storage lagoon.

2 Q Did you say anything to Mr. Teachey or did Geoff  
3 say anything to Mr. Teachey about lagoon number 1, as you  
4 observed it on September the 10th, 2009, if you recall?

5 A I don't recall. I don't recall asking him any  
6 questions about lagoon number 1.

7 Q So you went out the next day. You were with Kip  
8 Glazier and you took pictures. And then what else did you  
9 do?

10 A That was it. We took--we just took pictures, went  
11 to the stream locations. I basically took him on the same  
12 route that Geoff and I took the previous day.

13 Q And did you have an occasion on the next day to  
14 talk with Mr. Teachey?

15 A The next day being--well, now, the 9th I believe  
16 was a Wednesday. The 10th I believe was a Thursday. The  
17 11th, I think, was a Friday. Saturday and Sunday--of course  
18 I didn't work on Saturday and Sunday. Monday we did not go  
19 to the site. Tuesday we met with the EPA, Ken Rhame--and Ken  
20 Rhame and Rufino Salgado which was a--Rufino worked for OTIE  
21 Solutions, which was a contract--he was a contract person to  
22 provide sampling for the EPA.

23 Q So he wasn't contracted by either---

24 A (interposing) Oh, excuse me. No, that was--on  
25 the 15th Ken Rhame and--excuse me. On the 15th, Ken Rhame

1 and Kevin LaPointe and myself met at the House of Raeford.

2 We met--we just met there at the facility.

3 Q And who is Kevin LaPointe?

4 A He is a criminal investigator for the  
5 Environmental Protection Agency.

6 Q And who is Kenneth Rhame?

7 A Kenneth Rhame is a--he's the emergency coordinator  
8 for EPA Region 4, I believe.

9 Q And on the 15th did you have an occasion to talk  
10 with Mr. Teachey?

11 A I didn't speak with Joe much that I recall. I  
12 think he--Ken Rhame was questioning--did most of the  
13 questioning of Joe Teachey concerning the sludge in the  
14 creek.

15 Q Now, let me back me up to the Friday before  
16 because you've been in the courtroom and you heard Mr.  
17 Howard's testimony, did you not?

18 A Yes.

19 Q And he seemed to indicate that he spoke with you  
20 on that Friday and was actually--his folks had already begun  
21 cleaning. Do you recall any of that?

22 A No, he didn't meet with me on a Friday, huh-uh.

23 Q That Friday the 11th?

24 A No.

25 Q Or the Friday prior?

1           A     No. The first time I met with Clay was on the  
2 15th with Ken Rhame, and we met in Clay's office. Ken had  
3 asked Joe if he would take us to his supervisor, and so Ken  
4 and I went to Clay Howard's office. And as I recall, Ken--or  
5 Clay had called in--Joe Teachey was in there and Guy--I'm  
6 trying to think of his name.

7           Q     With the House of Raeford?

8           A     Yes. Two other personnel with the House of  
9 Raeford was in the room with us.

10          Q     Okay. And what did you--what happened? What did  
11 you say to Clay at that juncture?

12          A     Ken basically led the meeting. He talked to--he  
13 told Clay that there was a sludge in the creek behind the  
14 facility. He---

15          Q     (interposing) At that meeting did Clay seem to be  
16 aware of the sludge?

17          A     What he had indicated--well, Ken had asked him if  
18 he was aware of any problem with, you know, a--the sludge in  
19 the creek, if he was aware of that. And Clay said, "Well"--  
20 the only thing Clay alluded to was that he was aware that  
21 there was some--that there was some problem, but that Joe had  
22 taken care of it. And it was not--you know, it was an  
23 insignificant problem or inconsequential problem. It was--  
24 you know, there was nothing to it, that Joe had basically  
25 taken care of an issue. And he knew that there was some kind

1 of wastewater issue, but that it had been taken care of, that  
2 Joe was handling it.

3           And so Ken had asked him if he had seen the creek  
4 and Clay said no, he hadn't. And so Ken said, "Well, I"--Ken  
5 had taken pictures when we were standing at the back of the  
6 lagoon. And he took pictures of the creek and so he had  
7 those on his phone. And he asked Clay if he could just send  
8 them to him via e-mail.

9           And so he sent the pictures to Clay via e-mail.  
10 Clay turned around and pulled the pictures up on his screen,  
11 and the picture that Ken showed him was the picture of sludge  
12 standing--all that sludge that was standing in the creek.

13 And---

14           Q       (interposing) And what did you observe Mr. Howard  
15 do or say at that juncture?

16           A       He looked--to me he looked like he was pretty  
17 surprised. He was shocked. My opinion was he was shocked  
18 with the amount of sludge that was in the creek. He did--he  
19 turned around and the first person he looked at was Joe  
20 Teachey and just stared at him for a while, just stared at  
21 him. And I just remember thinking, "Boy, I'd hate to get a  
22 look like that from my boss."

23           But he then just--he turned back around and looked  
24 at the screen and he said, "Guys," he says, "I don't know  
25 what I'm looking at here." He says, "I"--and Ken had asked

1 him some questions about, you know, the sludge.

2           And I can't recall specifically what he had asked  
3 him, but I remember Clay's response was, "I don't know  
4 anything about the wastewater system, you know, how it  
5 works." He said, "I just kill chickens." He said, "That's  
6 what I do, guys. I just kill chickens."

7           And so he asked--and he was very gracious and he  
8 was very pleasant. He asked if he could--he says, "Can we go  
9 out there, please, and see? I'd like to see this for  
10 myself." And so we were like, "Sure, let's go." So we all  
11 met out there at the back of the second lagoon and Clay just  
12 stood there with his hands on his hips looking up and down  
13 the creek, just not really knowing what to say.

14           And we did walk downstream. We walked it--we  
15 walked downstream as far as where--you can walk on a spit of  
16 land along the Cabin Branch Creek up to the point where  
17 Parker Bark has a pond. It's an old mine pit that's filled  
18 with water. It comes to where--it discharges at the back of  
19 his facility. It kind of comes into and commingles with  
20 Cabin Branch. There's a--it's a low area. There's a low  
21 area in the area. There's a lot of standing like vegetation  
22 that's laying in the--not necessarily laying in the creek,  
23 but bushes and stuff that are kind of draped into the creek.

24           And so a lot of this sludge material was pretty  
25 much backed up from that point where it was real thick. The

1 real thick sludge material basically kind of ended in that  
2 area, and then it got more stringy-looking, you know,  
3 thinner. It thinned out beyond the vegetation. But you  
4 couldn't see much beyond that point. You can't really get a  
5 good view from behind that particular location just because  
6 of some of the vegetation.

7 Q Now, you were at Joe Teachey's deposition, were  
8 you not?

9 A I was.

10 Q And do you remember him saying that you told him  
11 to take what was in the lagoon--excuse me, what was in the  
12 creek and put it into the lagoon?

13 A I remember him saying that.

14 Q Did you tell him that?

15 A I did not tell him that.

16 Q When you went out to the lagoon on the--I mean out  
17 to House of Raeford on the 11th, did you see anybody working,  
18 moving anything from the creek to the lagoon?

19 A No. No. There was--the big backhoe was there.

20 Q Mr. Cavanaugh's backhoe?

21 A Mr. Cavanaugh's.

22 Q But that's the only piece of equipment you saw?

23 A Yes.

24 Q And when you went out there on the 15th, did you  
25 see anybody working from the creek to the lagoons?

1           A     No. I don't believe so on the 15th.

2           Q     Let me ask you this. Did you also have an  
3 occasion to take a sample of what was in the creek and what  
4 was in the lagoon?

5           A     I did.

6           Q     And which lagoon did you take the sample from?

7           A     I took a sample from the primary lagoon.

8           Q     Where?

9           A     On the north side, probably--just about at the  
10 halfway point, more towards Highway 117. I've heard the  
11 lagoons--there's--the lagoons have been described as being  
12 somewhere around maybe 675, 700 feet long. And I would have  
13 taken the sample probably about 400 feet or so from the dike  
14 wall---

15          Q     (interposing) And you---

16          A     ---between the primary and secondary lagoons.

17          Q     From lagoon--from the primary lagoon?

18          A     Uh-huh.

19          Q     And you took a sample from the creek as well?

20          A     Yes.

21          Q     And was anyone with you when you took those  
22 samples?

23          A     Ken Rhame was with me--Joe Teachey, Ken Rhame,  
24 Clay Howard. I'm trying to think if--I think those were the  
25 only--I think Clay and Joe were the only two from House of

1 Raeford that were---

2 Q (interposing) And do you remember what date you  
3 took that sample?

4 A It was on the 17th.

5 Q And what did you do with that sample?

6 A I brought it back to the lab, put it in a cooler  
7 in the back of the vehicle. It had ice in it. I brought the  
8 cooler back to our office, our lab, and put it in the lab for  
9 delivery to the UNCW Marine Science.

10 Q Do you know whether or not it was delivered to  
11 Dr.--to UNCW?

12 A To Dr. Song. It was delivered to UNCW the next  
13 morning.

14 Q And what was the purpose, for what purpose, if you  
15 know?

16 A To have the--have a DNA analysis conducted.

17 Q By whom?

18 A B.K. Song, Dr. B.K. Song.

19 Q Do you know if that was done?

20 A It was done, yes.

21 Q Are you aware of any results as a result of that  
22 analysis?

23 A Yes. He provided results to us, three different  
24 scans, three different DNA scans.

25 Q Can you read DNA?

1           A     No.

2           Q     Okay.

3           A     No. I mean that's not my expertise. But if you  
4 look at the--if you look at the scan, it has peaks at certain  
5 locations along an x-axis. And it has--and these peaks have  
6 certain heights to them.

7                     And what I've noticed is that where you have one  
8 peak on one scan done for the sample in the creek, you have  
9 another peak on the other scan that was taken on the sample  
10 that was collected from the lagoon, and they're in the same  
11 locations. The same peaks are showing up--or peaks are  
12 showing up at the same locations on these scans for both the  
13 Cabin Branch sample and the sample that was pulled from the  
14 primary lagoon.

15          Q     Okay. And do you know why Kenneth Rhame secured  
16 someone to pull--you said he had lab work done by Mr.  
17 Salgado, or he had samples pulled by Mr. Salgado. Do you  
18 know why he did that?

19          A     I don't know why. I'm assuming it was--it's  
20 probably routine.

21          Q     And so did you have an occasion to go back out  
22 after the 15th?

23          A     Went back on--was back out there on the 17th and  
24 also on the 23rd, I believe.

25          Q     Did the sludge look the same?

1           A     No, it's beginning to decompose on the 23rd  
2 especially. And as a matter of fact, what I was going to say  
3 earlier, when we had Clay Howard, you know, standing there on  
4 the creek bank with us, I explained to Clay exactly what he  
5 could expect to see in just a couple of days, that it was  
6 going to turn septic.

7                     A wastewater will go septic if it doesn't have--if  
8 it's not being kept fresh and if there's--and what I mean by  
9 keeping it fresh is by providing oxygen to it, you know.  
10 Mixing in oxygen will keep it from--it will still decompose,  
11 but without oxygen it's going to decompose anaerobically.  
12 And when it decomposes anaerobically, it is--it begins to  
13 turn very dark or black and starts beginning to look septic.

14           Q     And did you in fact see that?

15           A     Yes, we did. I explained to him exactly what he  
16 was going to see back there and how it was going to look in  
17 just a matter of days. And it did exactly what I expected it  
18 would do.

19           Q     Did Mr. Howard ask you what he could do to clean  
20 it up or remediation?

21           A     He did. He was--he wanted--he wanted to fix the  
22 problem. He wanted to--I mean he understood, I think, just  
23 how horrendous this was. And he was trying to offer to try  
24 to remediate or fix it or, you know, do whatever he could.  
25 And he was just open to, you know, any suggestions that--he

1 was just, you know, really--wanted to just try to do whatever  
2 he could to repair that creek.

3 Q And what did you tell him he could do to repair  
4 that creek?

5 A Well, my opinion was that it was probably just  
6 going to take a lot of rain events to flush it down. One of  
7 my concerns was that there's not a lot of options once it's  
8 already in stream for something like this. There's no way of  
9 really retrieving it, you know. You--there's really no  
10 technique to isolate the area that has been impacted and try  
11 to do some kind of in situ treatment.

12 I mean if this were something like--maybe if it  
13 were an oil spill, you could use some booms to try to keep  
14 the oil in place and try to skim the oil off the surface or  
15 suck the oil back out off the surface. With a wastewater  
16 it's--it was--it was already intermixing. We knew it was  
17 already a good ways downstream. It was already at the Brooks  
18 Quinn location by the time we came to the site on the 10th.

19 Q Well, isn't it a fact that they--didn't they try  
20 to aerate it?

21 A Well, they did, yeah. I mean they put in a small  
22 submersible pump at the Sheffield Road crossing. And that is  
23 the first--that's the first bridge crossing on Beaverdam  
24 Branch downstream of House of Raeford.

25 So they put in a submersible pump and they pumped

1 the water up to the bottom--basically the bottom of the  
2 bridge, and allowed the water to spray out. They had--I  
3 think they had fixed some spray nozzle that would allow it to  
4 kind of aerate. And it sprayed the water back into Beaverdam  
5 Branch trying to aerate, trying to oxygenate the water.

6 The Court: Who is "they," for the record?

7 The Witness: Clay Howard and---

8 The Court: (interposing) Oh, okay.

9 The Witness: Yeah. I'm sure he didn't set  
10 this up himself, but he was basically directing his staff---

11 The Court: (interposing) Okay.

12 The Witness: ---with House of Raeford, sir.

13 By Ms. LeVeaux:

14 Q How successful---

15 A (interposing) I think Joe Teachey--I'm not  
16 exactly sure who actually set the system up, but I know it  
17 was--it was more or less directed by Clay. And I'm sure that  
18 this option was probably, you know, offered via the EPA by  
19 Ken Rhame.

20 Ken is--as a matter of fact, he's an emergency  
21 response, kind of like an on-scene coordinator for the EPA  
22 for, you know, chemical spills, oil spills, and that. One of  
23 his jobs is to try to help figure out mitigative or remedia-  
24 tion efforts to help the environment recover from an environ-  
25 mental discharge--I mean a discharge to the environment or

1 impacts to the--to surface waters.

2                   The Court:                   And with that I'd like to go  
3 ahead and take a lunch break. We're going to go about five  
4 minutes longer, so we'll return at five minutes after 2:00  
5 today.

6                   (The hearing was recessed at 12:47 p.m. to  
7 reconvene at 2:05 p.m. this same day.)



1           A       This is--we look these up for assessment cases,  
2 cases we're going to assess.

3           Q       So you can determine what?

4           A       Who owns the facility and what the name of the  
5 facility in question is.

6           Q       Okay. If you will go to Respondent's Exhibit  
7 Number 2, do you recognize Respondent's Exhibit Number 2?

8           A       Yes, I do.

9           Q       And what is that?

10          A       This is a nondischarge permit for the House of  
11 Raeford Farms, Inc. in Rose Hill, North Carolina, permit  
12 number WQ0002005.

13          Q       The type of waste that you observed on or about  
14 September 10th, 2009, was that permitted?

15          A       Not to be in the creek it wasn't. This permit is  
16 for--it's a nondischarge permit, so it's not for discharge to  
17 surface waters. The wastewater is not supposed to be dis-  
18 charged to surface waters.

19          Q       And then if you will go to Respondent's Exhibit  
20 Number 3 and tell the Court what that is and whether or not  
21 you recognize it?

22          A       I recognize this. It is a DNA fingerprint  
23 analysis of *Bacteroides* 16S rRNA genes in House of Raeford in  
24 Cabin Branch.

25          Q       Did you prepare this document?

1           A     I did not.

2           Q     Did you have an occasion to review this document?

3           A     I had an occasion to look at it, yes, uh-huh.

4           Q     And Exhibit Number 4A?

5                     (Witness peruses documents.)

6           A     I recognize this document.

7           Q     And what is it?

8           A     These are--these are the stream statistics taken  
9 in Beaverdam Branch and Cabin Branch, and the dates collected  
10 varies. It's also analytical results for samples collected  
11 in Beaverdam Branch and Cabin Branch system.

12          Q     Okay. And if you'll flip that page and go another  
13 page over, you'll see Respondent's Exhibit Number 4B. Do you  
14 recognize that exhibit?

15          A     I do.

16          Q     And did you have the occasion to read this  
17 exhibit?

18          A     Yes, I have.

19          Q     Can you tell the Court what it states?

20          A     This is a report, a POLREP report prepared by  
21 Kenneth Rhame with the EPA, describing the incident that we  
22 found, the sludge in the creek, on December 10th.

23          Q     On September the 14th?

24          A     Well, we responded on December the 10th. Excuse  
25 me.

1 Q Are you saying December---

2 A (interposing) No, September the 10th; excuse me.

3 Q And this is when he was with you as well; is that  
4 correct?

5 A Yes. This is---

6 Q (interposing) He was---

7 A (interposing) This is referencing the incident  
8 that we responded to.

9 Q And on the next page, again, does this repeat the  
10 same?

11 (Witness peruses document.)

12 A Yes, this is POLREP number 1.

13 Q Do you know if there's a difference--if you'll  
14 turn two pages over, one is dated to Kenneth Rhame 9/16 and  
15 one is dated Kenneth Rhame 9/30. Have you reviewed both of  
16 these or do you need a minute to look at them?

17 A May I read them?

18 Q Uh-huh.

19 (Witness peruses documents.)

20 A I believe they are the same. It's referencing the  
21 same release to Beaverdam Creek. The same information is  
22 repeated in both.

23 Q And is this information any different from the  
24 information that you related summarily to this Court except  
25 for it's in greater detail?

1           A     Yes, it is.

2           Q     How is it different?

3           A     Is it different--I'm sorry; one more time?

4           Q     Okay. Is this the same information that you  
5 previously testified to or is this in greater detail?

6           A     It's basically--it's the same information. It's  
7 confirming what we saw. Kenneth Rhame responded to this  
8 incident and he's explaining what he---

9           Q     (interposing) But you were there---

10          A     ---witnessed.

11          Q     ---when Kenneth Rhame was there, were you not?

12          A     Yes, I was. Yes.

13          Q     And if you'll turn to Exhibit Number 5A, can you  
14 tell the Court what that is?

15                   (Witness peruses documents.)

16          Q     In fact if you'll just go through all the exhibits  
17 in 5, Tab 5?

18          A     Okay. 5A is a calibration bench sheet dated  
19 9/10/09 for a YSI meter and a pH meter. Exhibit 5B is a  
20 calibration record dated September 15th for a YSI meter and a  
21 pH meter. Exhibit 5C is a calibration record dated 9/18/09  
22 for a YSI meter.

23                   Exhibit 5D is a calibration record for September  
24 21st of a YSI meter. Exhibit 5E is a calibration record for  
25 September 23rd, '09 for a YSI meter. Exhibit 5F is a

1 calibration record dated September 23rd, '09 for a YSI meter  
2 and a pH meter. Exhibit 5G is a field meter calibration  
3 sheet. Exhibit 5H is a report of analysis from Environmental  
4 Chemists for samples collected on September 10th, '09, BOD  
5 nitrate, nitrite, total Kjeldahl nitrogen, fecal coliform.

6 Q Do you know if Petitioners were assessed for any  
7 of these parameters?

8 A No, they were not. Exhibit 5I is another report  
9 of analysis from Environmental Chemists for samples collected  
10 on September 17th of '09. And the sheets following are also  
11 analytical data for analyses requested by OTIE, Oneida Total  
12 Integrated Enterprises. There's also chain of custodies  
13 attached for samples collected on September 17th, '09 and  
14 September 18th, 2009 and also a chain of custody for  
15 September 23rd, 2009.

16 Q Go to 5J.

17 A 5J.

18 (Witness peruses documents.)

19 5J is a report of analyses for samples collected  
20 September 18th, 2009. The following page is a chain of---

21 Q (interposing) September 18th?

22 A September 18th, 2009---

23 Q (interposing) Okay.

24 A ---Exhibit 5J.

25 Q Okay. And 5K, did you already speak to these?

1 I'm sorry.

2 A Yes, I went through those--yes, I basically went  
3 through them.

4 Q You didn't say which exhibits. I'm sorry---

5 A (interposing) I think I finished.

6 Q I didn't hear you. Which exhibit are you on?

7 A Let me go to 5K1.

8 Q Okay. Tell the Court what 5K--

9 A (interposing) Exhibit 5K1 is a report of analyses  
10 for September 23rd, 2009, and it also has the attached chain  
11 of custody. Exhibit 5K2 is a report of analyses from  
12 Environmental Chemists for samples collected on September  
13 23rd, 2009 with an accompanying chain of custody.

14 Q And if you will go to Exhibit 6?

15 (Witness complies.)

16 A Exhibit 6 are---

17 Q (interposing) Do you recognize that?

18 A Yes, I do. It is Figure 1, dissolved oxygen  
19 levels in Beaverdam Branch and tributaries on September 10th,  
20 2009. And it shows the dissolved oxygen concentrations at  
21 various locations within Cabin Branch and Beaverdam Branch.  
22 And it takes in the vicinity of the House of Raeford Farms  
23 facility and the creek system, both Cabin Branch and  
24 Beaverdam Branch.

25 Q Okay. And what about Exhibit 7?

1           A     Exhibit 7 I recognize. It is Figure 2, dissolved  
2 oxygen levels in Beaverdam Branch on September 15th, 2009.  
3 It shows the concentration of dissolved oxygen in two  
4 locations, one at the Sheffield Road bridge and another  
5 location for Brooks Quinn Road bridge. And this is both  
6 Beaverdam Branch.

7           Q     And Respondent's Exhibit 7A1, do you recognize it?

8           A     I recognize this. It is analytical data from--  
9 analytical results from samples collected on September 23rd,  
10 2009. And these are analyses that were conducted by the DWQ  
11 laboratory.

12                     7A2 is also analyses for samples collected  
13 September 23rd, 2009. This analytical data comes also from  
14 DWQ Laboratory Section. These were for samples taken on  
15 Johnson Parker Road or State Route 1916.

16           Q     Go on, if you will.

17           A     Exhibit 7A3 are analytical results for samples  
18 collected on September 23rd, 2009 at the Beaverdam Branch  
19 location at the Sheffield Road crossing, State Route 1915.  
20 And this analytical data comes from DWQ's laboratory.

21                     Exhibit 7A4 is analytical data for September 23rd,  
22 2009 for samples collected in Cabin Branch at the Brooks  
23 Quinn Road crossing, State Route 1911, analytical again from  
24 DWQ laboratory.

25                     Exhibit 7A5, this is analytical data for

1 September--samples collected on September 23rd, 2009 in Cabin  
2 Creek near the footbridge located behind the House of Raeford  
3 lagoons at the House of Raeford--at the House of Raeford  
4 facility. This is analytical data from DWQ Laboratory  
5 Section.

6           Exhibit 7A6, also laboratory data for samples  
7 collected September 23rd, 2009 for the tributary to Beaverdam  
8 Branch at Highway 117. And this also comes from DWQ  
9 Laboratory Section. Exhibit 7A7 are samples--analytical data  
10 for samples collected September 23rd, 2009 for Beaverdam  
11 Branch at Highway 11. And this is analytical data from DWQ's  
12 laboratory. Exhibit 7A8 is analytical data for September  
13 23rd, 2009 from Maxwell Creek at State Route 1920, and this  
14 is analytical data from DWQ Laboratory Section.

15           Exhibit 7A9 is data for samples collected on  
16 September 23rd, 2009 for Beaverdam Branch at Parker Bark  
17 facility. And the analytical data comes from the DWQ  
18 Laboratory Section. Exhibit 7A10 are analytical data for  
19 September 23rd, 2009 for Cabin Branch at Highway 117  
20 downstream from the By-Products. This is DWQ--this  
21 analytical comes from DWQ laboratory.

22           Q     Is it fair to say that in Exhibit Number 7,  
23 omitting the first page, which--the first--Number 7 itself  
24 that speaks to dissolved oxygen--the parameters that are set  
25 out in those lab reports are parameters that the petitioners

1 were not assessed for?

2 (Witness peruses documents.)

3 A That is correct.

4 Q And is it fair to say that you didn't pull these  
5 samples, that Stephanie Garrett pulled these samples?

6 A I accompanied Stephanie Garrett in accompanying  
7 (sic) these samples.

8 Q Okay. Thank you. And if you will, going to  
9 Respondent's Number 8?

10 A Exhibit Number 8 is a map of the area including  
11 Cabin Branch and Beaverdam Branch. It shows the dissolved  
12 oxygen readings in the creek system taken on September 23rd,  
13 2009 in and around the House of Raeford facility.

14 Q And Exhibit 9, could you tell the Court what that  
15 is?

16 (Witness peruses document.)

17 A Exhibit 9 is a map showing locations where stream  
18 statistics were taken for temperature, dissolved oxygen,  
19 conductivity, pH, and percent saturation.

20 Q In fact Exhibit Number 9 sort of tracks which you  
21 spoke to in your earlier testimony; is that correct?

22 A Yes. It's---

23 Q (interposing) We'll come back to that.

24 A Okay. Yes.

25 Q And Exhibit Number 10?

1           A       This is a picture of a map that shows more of a  
2 close-up. It's zoomed in, basically--it's more zoomed than  
3 some of the previous maps. And it is indicating locations  
4 where photographs were taken by myself during my investiga-  
5 tion of the sludge in the creek.

6           Q       And Exhibit 11A?

7           A       11A is another picture of the area where  
8 photographs were taken in and around the House of Raeford  
9 lagoons, Cabin Branch, and Beaverdam Branch in the vicinity  
10 of Brooks Quinn Road and Sheffield Road.

11          Q       And Exhibit 11B?

12          A       11B is a close-up of the approximate photo  
13 locations. And it's a close-up of the stream crossing where  
14 Cabin Branch crosses Brooks Quinn Road and travels behind the  
15 House of Raeford lagoons. And the upper part of that photo  
16 captures part of the ponds at the Parker Bark facility that  
17 are--what used to be an old mine pit, now ponds.

18          Q       And Exhibit 12, do you recognize it, and if you  
19 do, what is it?

20          A       I recognize this photo. Exhibit 12 is a--also a  
21 photo of sample locations and also identifies the streams  
22 that are in the vicinity of where we conducted our investiga-  
23 tion for this sludge in the creek.

24          Q       And Exhibit 13, what is Exhibit 13?

25          A       13 is--13 is a presentation of--13A. Let me start

1 with 13A. 13 is a Cabin Branch stream walk. Myself and  
2 Joanne Steenhuis conducted a walk of this stream from the  
3 headwaters of Cabin Branch east of the railroad track to  
4 Brooks Quinn Road, just a little bit beyond Brooks Quinn  
5 Road.

6 Q And when did you take this walk, if you know?

7 A I believe it was in February, March. It was in  
8 the early--late winter, early spring, February or March.

9 Q Of?

10 A 2010. 2011?

11 Q 2011?

12 A I'm not sure.

13 Q Was it this year or was it last year?

14 A I think it was this year. It was this--yeah.

15 Q And 13B? And again, I'll let you speak to these  
16 in greater detail, but I'm just wanting you to tell the Court  
17 whether or not you recognize them and what it is.

18 (Witness peruses documents.)

19 A 13B is a color photo, a Google photo, of the area  
20 where Cabin Branch--it shows the direction of flow of Cabin  
21 Branch and it also shows the House of Raeford plant, the  
22 proximity of Cabin Branch to House of Raeford plant. And it  
23 also shows Parker Bark facility just north of the House of  
24 Raeford plant, and it also shows the--also, part of House of  
25 Raeford's property just south of House of Raeford processing

1 plant.

2 Q Okay, and 13C?

3 A 13C is another map of the creek system showing the  
4 stream identification and sample locations. It looks like it  
5 might be a repeat of another exhibit.

6 Q I'm sorry?

7 A It might be a repeat of an another exhibit we  
8 looked at.

9 Q Okay. And 13D?

10 A 13D is a--that might be a repeat too. That's the  
11 dissolved oxygen levels in Beaverdam Branch on September  
12 15th, 2009 indicating the two low dissolved oxygen readings  
13 downstream of House of Raeford's lagoons.

14 Q And 13E?

15 A Is another map showing the dissolved oxygen levels  
16 in Beaverdam Branch and tributaries on September 23rd.

17 Q And 13F?

18 A That's a picture of the headwaters of Cabin Branch  
19 taken on March 28th, 2011, which is the day that we did our  
20 stream walk.

21 Mr. Jones: Excuse me. While we're at a  
22 stopping point, may I inquire, does the Court's version of  
23 these Exhibit 13 pages--are they in full color?

24 The Court: No.

25 Mr. Jones: They're not?

1                   The Court:                   Some of the photographs are,  
2 but the maps---

3                   Ms. LeVeaux:                   (interposing) Some of them are  
4 and some of them are not, but everyone should have the same  
5 documents. We tried to give color where we could.

6                   Mr. Jones:                   Okay. All ours are in black  
7 and white. I just wondered if they were in color.

8                   The Court:                   I have--like 13F is in color.

9                   Ms. LeVeaux:                   Judge, yours is in color?

10                  The Court:                   Yes, it is. But that's--some  
11 of them are in black and white. It's not a---

12                  Ms. LeVeaux:                   I didn't know. I didn't know  
13 which ones were.

14                  A                   So this is what the--this is what the wetland area  
15 looks like. That is the headwaters to Cabin Branch on March  
16 28th, 2011.

17                  Q                   So these were taken well after the occurrence?

18                  A                   Yes.

19                  Q                   And what was the purpose--and go through the  
20 exhibits if you recognize them, but explain to the Court what  
21 the purpose was behind it.

22                  A                   The purpose of the stream walk was for our stream  
23 project, DWQ's--our Wilmington stream project. We---

24                  Q                   (interposing) And you don't have to go into great  
25 detail. I just want you to go through the pictures. We'll

1 come back to them in greater detail, but just generally.

2 A Like where they're located or what the signifi-  
3 cance of the picture is---

4 Q (interposing) Right.

5 A ---for this case?

6 Q Uh-huh.

7 A For 13F, the significance of this picture is it  
8 does indicate that this wetland area is not always flooded or  
9 inundated in a tremendous amount of water. There's times  
10 when it's very dry. You can walk through it.

11 And as you can see here, this area--you can see  
12 how broad the water is. It's beginning to channelize through  
13 the wetland. There are areas where there's no water at all.  
14 And you can see where the creek is--the creek has established  
15 here in this area, but---

16 Q (interposing) And this was taken in March?

17 A It's taken in March, uh-huh. 13G is an  
18 agricultural ditch that feeds into the headwaters of Cabin  
19 Branch. And this particular ditch is located--would be  
20 located west of Highway 117 in between the Duplin Winery  
21 facility and Big Ed Feed Mill.

22 Exhibit 13H is a picture of Cabin Branch. This  
23 was taken upstream of the House of Raeford facility. And  
24 what you see in this photo is a beaver dam. About in the  
25 middle of the photo, you can see a beaver dam. And you can

1 see that the flow of the creek is coming over the beaver dam  
2 just on the left of the beaver dam. The creek is a little--  
3 is probably about 15, 20 feet, maybe--somewhere around 20  
4 feet wide right here.

5 Q 13I?

6 A 13I is a close-up of the water coming over the  
7 beaver dam taken on April 4th, 2011.

8 Q And you can just take it upon yourself to look at  
9 the next exhibits.

10 A Okay.

11 (Witness peruses documents.)

12 13--there's another photo just behind that in my  
13 book that's not--doesn't have an exhibit that's between I and  
14 J.

15 Ms. LeVeaux: I don't have anything between I  
16 and J. Does anyone else?

17 Mr. Jones: No.

18 A Okay. 13J shows a small unnamed tributary that is  
19 coming into Cabin Branch, and this is upstream of House of  
20 Raeford facility. 13K is another picture of a beaver dam in  
21 Cabin Branch. This photo was taken upstream of House of  
22 Raeford on April 4th, 2011.

23 13L is another picture of Cabin Branch. And you  
24 can see--this is a good photo of how shallow in some places  
25 Cabin Branch can be. Even when there is flow in the creek in

1 this particular location, the creek is very shallow. You can  
2 actually see the bottom of the creek and you can see the  
3 sandy bottom in this photo.

4           13M, Exhibit 13M, is another photo of Cabin Branch  
5 upstream of House of Raeford. And you can see how clear the  
6 water is. You can basically see the bottom of the water.  
7 It's good indication of the type of quality that this stream  
8 can have. Notice the tannic color. It's tannic in color,  
9 but it is clear. You can see the bottom of the creek here.

10           13N is another photo of Cabin Branch upstream of  
11 House of Raeford. And again, it's--you can see how shallow  
12 this portion of the creek is. You can see the bottom of the  
13 creek. You can see the reflection of the trees in the  
14 surface of the water. It's a good indicator of a creek that  
15 does not appear to have any impacts.

16           Exhibit 130 is another picture of Cabin Branch  
17 upstream of House of Raeford. These photos help to show you  
18 what the nature of Cabin Branch is. A lot of the photos in  
19 our case are photos of Cabin Branch right behind House of  
20 Raeford and downstream of House of Raeford. But these photos  
21 are good photos that indicate that this really is a very nice  
22 creek. People--you know, this is a creek that I really  
23 enjoyed hiking.

24           Q     Again, just describe the photo.

25           A     13P is another photo in this area. This is Cabin

1 Branch as well. It's upstream of House of Raeford. It shows  
2 some vegetation overhang in the creek and it is an area where  
3 water is being held--impeded from flowing. And you've got  
4 some duckweed on the surface here.

5                   The Court:                My photograph doesn't show some  
6 duckweed. It shows entirely duckweed. Is that---

7                   The Witness:                Yes.

8                   The Court:                My photograph is entirely  
9 green.

10                  The Witness:                Yeah. It's a close--it's a  
11 close-up.

12                  The Court:                Okay.

13                  The Witness:                The upstream location from  
14 this, Your Honor, was actually free of duckweed, but it was  
15 showing it stacking up. It was just kind of building up  
16 right here because there was overhanging vegetation in the  
17 way.

18                  The Court:                Okay.

19                  The Witness:                So there was--this duckweed was  
20 actually kind of concentrating right there where that was--  
21 where the overhanging vegetation was. And it was taken, Your  
22 Honor, on April 4th, so you can see--and this is actually--  
23 we're walking downstream. And so you can see--most of these  
24 upstream photos do not show any evidence of any duckweed.  
25 And just here where it's being impeded, it's--you have some

1 duckweed formation.

2           The Court:           It might be good to describe  
3 the photograph itself. I notice the table of contents just  
4 say "A through L walk." And none of the photographs are  
5 labeled themselves, so the only description we'll have is  
6 what the court reporter is taking. Is that right?

7           Ms. LeVeaux:        Your Honor, we're going to come  
8 back to these photos---

9           The Court:           (interposing) Okay.

10          Ms. LeVeaux:        ---actually with slides. And  
11 that's why I was telling---

12          The Court:           (interposing) Okay.

13          Ms. LeVeaux:        I said, "Don't spend too much  
14 time with them. Just sort of tell the Court--describe for  
15 the Court what we have, the fact that you recognize them."  
16 And then we'll come back to them in greater detail.

17          A        13Q is a picture of a farm that's located adjacent  
18 to Cabin Branch. And there you do see some cows in the  
19 photo.

20          Q        Is this upstream or downstream of---

21          A        (interposing) This is upstream.

22          Q        Do you know how many cows they have there?

23          A        I didn't really count them, but--I mean we  
24 probably saw maybe 15 max.

25          Q        But you've been past this farm before, have you

1 not?

2 A Yes.

3 Q And you've seen the cows there before---

4 A (interposing) Yes.

5 Q ---have you not?

6 A Yes.

7 Q Have you seen more than 25?

8 A Not that I recall, not that many and that number,  
9 no. 13--I'm sorry.

10 Q I'm sorry; 13R.

11 A 13R is a picture of Cabin Branch just directly  
12 upstream of House of Raeford. And 13S is also a photograph  
13 of Cabin Branch just directly upstream from House of Raeford.

14 Q Now, Ms. Willis, on the far--you know, it looks  
15 like the stream is divided. And is that vegetation or what  
16 is that on the water?

17 A In the background there in the distance is a--it's  
18 a low area. It's a very low area, a wetland. It looks like  
19 a wetland area. And the creek is high enough that it's  
20 backing up into this low area. And you can see some duckweed  
21 growing along the edges up there in the wetland.

22 And 13T is another photo of basically that same  
23 area. 13U is also a photo in that same vicinity, more of a  
24 close-up of the cattails in the background. And you can see  
25 a mat of algae growing in the creek this side of the--I'm not

1 sure what kind of tree that is, but---

2 Q Okay. And Exhibit 14 sort of traces back what  
3 you--what occurred on or about September the 10th, 2009, is  
4 that correct, and Exhibit 15?

5 A Yes.

6 Q And pretty much what you've testified to, I'm  
7 going to come back to that with the slides. So I'm going to  
8 ask you just to skip those two exhibits right now and go to  
9 Exhibit 16.

10 (Witness complies.)

11 A Exhibit 16 is a bench sheet for stream statistics  
12 for Beaverdam.

13 Q Exhibit 17?

14 A Exhibit 17.

15 (Witness peruses document.)

16 Exhibit 17A are field notes, Stephanie Garrett's  
17 field notes, for September 23rd, 2009. These are field  
18 notes.

19 Q But at the top of--oh, I see. She put the  
20 number--the date in 9--she calls it 9/23?

21 A "9-9-23" is September 23rd, 2009.

22 Q Okay.

23 A Yes.

24 Q But they are not all of her field notes, are they?

25 A No. If you--the next page that--in the upper

1 left-hand corner that shows 270, those are my field notes.  
2 And these field notes were taken on September 10th, 2009.  
3 And these are stream statistics taken in the creek system  
4 during our investigation on September 10th.

5 Q But there's various---

6 A (interposing) Mine and Geoff's.

7 Q ---dates on these field notes, are there not?

8 A Yes.

9 Q Pages 2---

10 A (interposing) And then further on are just field  
11 notes that are relative to this incident. There are several  
12 pages of field notes until you get to Exhibit 17B, which is a  
13 travel log. And this is Stephanie Garrett's travel log for  
14 her vehicle. The significance of the travel logs are--this  
15 is documentation that we provide in an assessment--prepara-  
16 tion of an assessment for civil penalties.

17 Q And are the expenses associated with these---

18 A (interposing) Yes.

19 Q ---computed into the expenses?

20 A Yes. It supports enforcement costs.

21 Q And then going to Exhibit 18?

22 A Exhibit 18 is a chain of custody record.

23 Q Do you know if the "COC dropped" means--do you  
24 know what that means?

25 A What the "COC dropped" means? The laboratory

1 indicated that they had dropped the chain of custody due to  
2 the form not having a signature under the "Sealed by"  
3 section.

4 Q And did they subsequently secure a signature?

5 A They accepted the certificate of coverage because  
6 the cooler that these samples were in had a security tape on  
7 it. The security tape had not been breached, and the  
8 security tape had the proper initials on it.

9 Q And do they indicate that they okayed it anywhere  
10 on this document?

11 A They indicated that they okayed it at the  
12 right-hand corner of the document dated September 24th, '09.

13 Q And again, these are for parameters other than DO?

14 A Yes.

15 Q And this is to the state lab?

16 A Yes.

17 Q And Exhibit 19A, do you recognize this exhibit?

18 A That's Dr. Song's--it's not a résumé, but it's the  
19 supporting information of his expertise.

20 Q And I won't have you speak to that. If you'll  
21 just go to Exhibit 20?

22 A 20?

23 Q Yes.

24 A I recognize this document. It's the notice of  
25 violation prepared for House of Raeford Farms for the sludge

1 in the creek.

2 Q And what about 21?

3 A 21 is a response to the notice of violation by  
4 House of Raeford Farms to the division to Rick Shiver, to the  
5 Surface Water Protection Section concerning---

6 Q (interposing) You were here during Mr. Howard's  
7 testimony, were you not?

8 A I was.

9 Q And he spoke to this exhibit. Do you recall?

10 A Yes.

11 Q And Exhibit 22?

12 A This is a memorandum prepared by me for enforce-  
13 ment recommendation to the House of Raeford Farms for the  
14 sludge in the creek found on September 10th, 2009 signed by  
15 Rick Shiver.

16 Q And what about Exhibit Number 23?

17 A 23 is an assessment factor sheet.

18 Q And 24?

19 A This is an assessment factor---

20 Q (interposing) Did you prepare this?

21 A No, I did not.

22 Q But do you recognize it?

23 A I do.

24 Q Exhibit 24B, do you recognize it?

25 (Witness peruses document.)

1           A     Yes.

2           Q     And what is it?

3           A     It's--these are case numbers--cases assessed  
4 against House of Raeford. It's assessment histories,  
5 violations--a history of violations and assessments.

6           Q     And Exhibit 25?

7                     (Witness peruses document.)

8           A     This is the civil penalty assessment to the House  
9 of Raeford, Rose Hill fresh chicken plant, for the sludge  
10 discharge in the creek including the justification for  
11 remission request and the waiver of right to an adminis-  
12 trative hearing and stipulation of facts.

13                     (Pause.)

14           Ms. LeVeaux:           Let me stop here for a minute  
15 and let's go back to 24B. Your Honor, if I may approach the  
16 bench and hand up other documents which relate to the  
17 compliance and history--compliance history. May I approach  
18 the bench, Your Honor?

19           The Court:               Yes, you may.

20           Ms. LeVeaux:           I'm handing up Exhibits 24C--I  
21 think it goes through G. If you could put that right behind  
22 24B?

23           The Court:               I do want to know for the  
24 record--it appears that 24B is a mixture, if I'm reading it  
25 right, of assessments against House of Raeford Farms in both

1 Rose Hill and Wallace.

2 Ms. LeVeaux: Right.

3 The Court: It looks like it's a mixture of  
4 the two.

5 Ms. LeVeaux: Because they're all the same  
6 corporation, yes.

7 The Court: Okay.

8 Ms. LeVeaux: And Mr. Poupart will speak to  
9 that in greater detail, Your Honor.

10 (Pause.)

11 By Ms. LeVeaux:

12 Q And if you will go to--okay. If you'll go to  
13 Exhibit 25 and describe for the Court again what you have  
14 before you in 25? I'm sorry. Would you identify 24C, D, E,  
15 F, and G?

16 A 24C is the notice of violation to the House of  
17 Raeford wastewater treatment plant, permit WQ0002005, dated  
18 September 7th, 2004 issued by Charlie Stehman with an  
19 accompanying inspection report.

20 Exhibit 24D is a compliance evaluation inspection  
21 from Tara Croft with the Aquifer Protection Section to the  
22 House of Raeford Farms on March 23rd, 2007 with the  
23 accompanying compliance inspection report. And Exhibit 24E  
24 is a response from the House of Raeford to Ms. Tara Croft.

25 Exhibit 24F is a compliance evaluation dated--

1 letter date January 5th, 2009 to the House of Raeford Farms  
2 for the permit number WQ 0002005 for the wastewater surface  
3 irrigation system and the accompanying inspection report.

4 Exhibit 24G is a notice of violation dated  
5 August 6, 2010 to Mr. Robert Johnson with the House of  
6 Raeford for permit number WQ 0002005 and an accompanying  
7 inspection report conducted by Jim Bushardt.

8 Q And did you get 25G as well?

9 A 25G?

10 The Reporter: Do you mean 24G?

11 Q 24G; sorry.

12 A 24G.

13 Q Did you speak to 24G?

14 A I think I did. Let me---

15 Q It's also by Jim Bushardt.

16 A Uh-huh.

17 (Witness peruses document.)

18 Yes.

19 Q And 25 is a copy of the constituting agency  
20 action? Have you---

21 A (interposing) Yes.

22 Q ---reviewed this?

23 A Yes.

24 Q Does this in fact encompass much of the  
25 information that you submitted?

1           A     Yes.

2           Q     And Exhibit 26 is the contested case petition.  
3 Have you seen that before?

4           A     I have.

5           Q     And Exhibit Number 27--were you in the courtroom  
6 when Mr. Holley took the stand?

7           A     Yes, I was.

8           Q     And in fact this is not--do you recall this as  
9 being a copy of what he submitted to the Court which has  
10 already been admitted into evidence?

11          A     Yes, it is.

12          Q     Exhibit 28--do you recognize Exhibit 28A?

13          A     Yes. It's a, yes, state route map for the area  
14 around Rose Hill.

15          Q     And Exhibit 28B?

16          A     Yes, that's the same. It's state route numbers  
17 with the creek system shown in the vicinity of Rose Hill.

18          Q     And Exhibit 29, this is the exhibit (sic) of James  
19 Bushardt. Have you seen this before?

20                   (Witness peruses document.)

21          Q     If you don't recognize it, that's fine.

22          A     No, I don't think I've reviewed it.

23          Q     Okay. That's fine.

24          A     I've seen it, but I haven't reviewed it.

25          Q     And similarly, with Exhibit 30 have you--do you

1 recognize this document?

2 A I do, but I did not review it.

3 Q You did not prepare it, but you do---

4 A (interposing) No.

5 Q ---recognize it?

6 A Yes.

7 Q As the résumé for Mr. Richard Shiver?

8 A Yes.

9 Q And if I could take you to Exhibit Number 14?

10 A 14.

11 The Court: Before you do that, let's take  
12 about a five minute break.

13 The Reporter: Off the record. 3:07 p.m.

14 (A brief recess was taken.)

15 The Reporter: On the record. 3:18 p.m.

16 The Court: This hearing will come to  
17 order. It's now 3:17 on November the 30th, 2011 and all  
18 parties present when we recessed are again present. Ms.  
19 LeVeaux.

20 Ms. LeVeaux: Thank you, Your Honor. And did  
21 you say 3:00 or 2:00? 3:00, 3:00; sorry. Your Honor, is  
22 there a switch that you can switch on for the screen?

23 The Court: Apparently there is. For a  
24 laptop?

25 Ms. LeVeaux: Yes, sir.

1                   The Court:                   It must be the button that says  
2 "Laptop."

3                   By Ms. LeVeaux:

4           Q       Ms. Willis, you have before you Respondent's  
5 Exhibit Number 14, which is actually what you see on the  
6 screen; is that not correct?

7           A       Yes.

8           Q       And describe for the Court what Respondent's  
9 Exhibit 14 represents.

10          A       This is a downstream view of Beaverdam Branch from  
11 the Sheffield Road crossing. We're standing on the Sheffield  
12 Road bridge.

13          Q       Where on the site? Can you show us?

14          A       Yeah, I'd be basically right here (indicating). I  
15 mean this is where the bridge is. I'm taking this photo from  
16 an overlook from the Sheffield Road bridge crossing over  
17 Beaverdam Branch.

18          Q       And where is House of Raeford?

19          A       It is upstream of this location.

20          Q       Could you put an arrow or an X?

21          A       It's basically that direction (indicating),  
22 approximately maybe--3/10 of a mile maybe.

23          Q       Is there anything significant about this photo?

24          A       Yes. You can see--you can see a scum, a  
25 consistent scum, on the surface of this water. You can begin

1 to see--over in this area (indicating) you're starting to see  
2 some duckweed forming in the stream.

3           You can see it actually in the creek, but this--  
4 one of the things I'd like to point out in this picture is  
5 the reflection in the water. You don't get a nice, clear  
6 reflection of the vegetation or the trees in the water  
7 itself. It's--you have a--this is the--some of this is the  
8 sludge material that has moved downstream from behind the  
9 House of Raeford and is still floating on the surface of the  
10 water. But it's kind of--it's been strung out and it's been  
11 diluted with the creek water.

12           Q     So did you notice any oil or grease in the water  
13 at this juncture?

14           A     Just that it was a--this material did have kind of  
15 greasy look--greasy, slimy look to it. And what this photo  
16 doesn't capture well--it does capture some of the vegetation,  
17 but it--I don't see as much of the brown color as what you  
18 will see at the next--at the next downstream location, which  
19 would be at the Brooks Quinn crossing---

20           Q     (interposing) Okay.

21           A     ---on Beaverdam.

22           Q     So let's go to the next slide. Is there anything  
23 else you want to tell the Court about this slide?

24           A     Well, and you're also seeing heavier duckweed back  
25 here (indicating) in that vicinity. And it is probably

1 stacking up in that area because of some maybe logjams, but  
2 there is accumulation of some duckweed.

3 (Pause.)

4 That's Exhibit Figure B.

5 Q Could you describe it for the Court, Figure B?

6 A This is a picture of the upstream. This is  
7 Beaverdam Branch. I'm standing on the Sheffield Road bridge  
8 crossing and took a snapshot of a photo--this photo is a  
9 snapshot of the upstream view from the bridge, the Sheffield  
10 Road bridge. And again, you can see that there is a lot of  
11 duckweed forming on the surface of the water.

12 Q Is this date correct?

13 A Yes. September 11th is correct.

14 Q And this fairly and accurately depicts what you  
15 observed on that date?

16 A Yes.

17 Q Where were you--can you put an X--are you right  
18 here looking down (indicating)?

19 A I'm basically standing on the edge of the bridge.

20 The Court: So the first photograph you're  
21 turned one way and you turned around the other---

22 The Witness: (interposing) Correct.

23 The Court: ---for this photograph?

24 The Witness: Exactly; looking downstream and  
25 then turned around, and I took a snapshot of the view

1 upstream.

2           A     And I'd also like to draw your attention to the  
3 fact that--if you can recall some of the pictures that we  
4 looked at Cabin Branch on the stream walk how clear the water  
5 was, I'd like to draw your attention to the turbidity in the  
6 water here. It is not a clear--this stream is not clear at  
7 this point. There's a lot of turbidity, murkiness in the  
8 water.

9           Q     And where is House of Raeford, in what direction?

10          A     House of Raeford is--would be basically that  
11 direction up the creek (indicating). Beaverdam Branch also  
12 comes in. So what you're--you're kind of looking at a  
13 confluence here because Cabin Branch--or Beaverdam Branch  
14 comes in from--there's a ditch system that comes in this way  
15 (indicating). It comes in--well, there's a ditch system that  
16 comes in this way (indicating). And then also Beaverdam  
17 Branch from Highway 117 also comes in from this direction  
18 (indicating).

19                   And Cabin Branch--they kind of--this is like a Y  
20 intersection, so to speak, where Cabin Branch and Beaverdam  
21 Branch come together. And then where I'm standing on the  
22 bridge, from that point downstream, we refer to it as  
23 Beaverdam Branch rather than Cabin Branch. It assumes the  
24 name of Beaverdam Branch rather than Cabin Branch.

25                   And notice there is a heavy amount of duckweed

1 along the shoreline here (indicating). And so in the areas  
2 of the creek where it's not flowing as well, in the center of  
3 the creek there's not as much duckweed, but you are seeing  
4 some duckweed along the edges of this creek.

5 Q Would you describe for the Court what you observed  
6 in Figure C?

7 A This picture was taken on September 11th at the  
8 Brooks Quinn Road bridge crossing. And you don't see as much  
9 of the duckweed at this particular location, but you are  
10 seeing across the surface of this water this brown--it's like  
11 a brown slimy scum. It's--you can tell by looking at the  
12 reflection in the water that you're not getting a nice,  
13 crisp, clear reflection in the water. And that's indicative  
14 of a scum on the surface of the water.

15 And this isn't--you're not really seeing as much  
16 duckweed here at this location like you do at the Sheffield  
17 Road. Primarily all of this looked like a brown--and I think  
18 the picture in the notebook shows it better. It was kind of  
19 a brown--brown biomass sludge-looking material.

20 It was a foreign matter at this location. We did  
21 not notice any odor. There was no odor at this location.  
22 And it was a pretty consistent mat of floating organic  
23 material on the surface of the water.

24 And this is a close-up. And you're beginning to  
25 see in this brown material--and it's kind of a--I don't know

1 if I can describe the color brown, but it's definitely  
2 organic. And it is--you can see the bubbles forming on the  
3 surface of the water, which was telling me that there was  
4 some denitrification that was probably taking place due to a  
5 lot of these bubbles forming on the surface of the water.  
6 And there are--you can see some leaves in the water, but  
7 primarily the surface of the water is completely covered with  
8 this brown scum.

9           This is a picture of Cabin Branch at the upstream  
10 location from House of Raeford. It's at the Brooks Quinn  
11 Road crossing where Cabin Branch crosses Brooks Quinn. And  
12 this is the last road crossing before--this is the last road  
13 crossing before it travels behind House of Raeford. There's  
14 no other stream crossing between this location and the House  
15 of Raeford.

16           And you can see that there is not a scummy  
17 material in the surface of this water. You don't see any  
18 buildup of any kind of organic material in the vegetation.  
19 There's plenty of vegetation that's hanging in the water on  
20 both the left and the right-hand side. There's nothing  
21 trapped in that. There's a little bit of algae along the  
22 right-hand corner over here (indicating), just a little bit  
23 of algae in this.

24           But you're not seeing the formation of any of the  
25 duckweed that you saw in Figure A and Figure B. There was no

1 odor here. This is where--we took a dissolved oxygen reading  
2 here and the dissolved oxygen was 4.9. You don't see any--we  
3 didn't see any evidence whatsoever of any material in the  
4 creek at this location, and our dissolved oxygen reading--or  
5 stream stats indicated the same on September 10th. And this  
6 is a photo taken on September 11th, and the condition has not  
7 changed from September 10th to September 11th.

8           This is another photo of Cabin Branch, which is  
9 directly--and this was taken on September 15th. I conducted  
10 this stream walk with Kevin (sic) Rhame. We walked up the  
11 center. You can see the ripples in the water. That's from  
12 me walking up the creek.

13           I had on some hip waders and the water wasn't much  
14 deeper than--well, it was actually below my hips because I  
15 have--I don't have chest waders. I have hip waders, so they  
16 stop right at the top of my legs. And so the water wasn't  
17 deeper than that. It's a shallow creek in this area and you  
18 can see that at this location here it takes a hard right--a  
19 hard left, excuse me. It goes this way (indicating).

20           But what I'd like to bring your attention to here  
21 is that the reflection is nice and clear. It's crisp. You  
22 don't see any floating brown sludge at all or slick in the  
23 water. We don't even see duckweed in this photo. There's  
24 no--really no excessive like algae growth. You can see the  
25 standing vegetation here along the sides of the creek, but

1 nothing out of the ordinary.

2           As I walked up this creek, I was also kicking the  
3 bottom looking for the potential for some, you know, settle-  
4 able solids deposits. There was nothing in the creek. The  
5 creek was clear upstream. And again, this is just directly  
6 upstream of House of Raeford.

7           Q     And you were walking in the water at this  
8 juncture?

9           A     Yes. And I do have a--there is a photo--one of  
10 the maps shows the photo--the actual photo location on the  
11 map. And this location is probably halfway between the House  
12 of--where Cabin Branch comes in behind House of Raeford.  
13 It's about a halfway point--not as a crow flies, but in the  
14 stream walk, if you were to walk the stream, it's about the  
15 halfway point between where House of Raeford facility is  
16 located and where Brooks Quinn Road crosses--where Cabin  
17 Branch comes under Brooks Quinn Road.

18                 This is a picture taken on September 15th of a  
19 field that is located just adjacent to Cabin Branch. It's on  
20 the east side of the creek--excuse me, the west side of the  
21 creek. And it's--and the reason I took this photo, one of  
22 the things that I was looking for during my investigation was  
23 any indication that a hauled sludge could have been brought  
24 in by tanker truck.

25                 For the volumes that we saw in the creek, it would

1 have taken several tanker trucks in order to transport that  
2 amount of sludge and deposit it in the creek behind the House  
3 of Raeford. So part of my investigation was to look for any  
4 evidence of an access point where a tanker truck could have  
5 gained access to the creek and dumped sludge behind House of  
6 Raeford.

7           And I've investigated other stream incidents where  
8 one of the things that you can see if a tanker truck is  
9 bringing--you know, were to try to deposit sludge and get  
10 access to a creek--and especially in a very wet area, in an  
11 area where there's a lot of dense vegetation--is you would  
12 see truck tracks. You'd see the tire tracks, especially for  
13 a truck that's going to be weighted down with a lot of  
14 sludge. And it wouldn't matter whether it was a 2,000 gallon  
15 tanker truck or whether it was a 7,000 gallon tanker truck  
16 . You would still see tire tracks.

17           I did look at both sides of--when I did my  
18 investigation, I looked for any possible means of any other  
19 sources or avenues of getting sludge in that creek besides  
20 House of Raeford. And I walked the fields on both sides of  
21 the creek, both up the creek and I walked in the areas that  
22 you could even get access downstream and on the west side of  
23 the creek as well. And there was no evidence that any tanker  
24 truck could have hauled in sludge to deposit it behind the  
25 House of Raeford facility.

1           This is another picture of--a snapshot taken on  
2 September 15th of Cabin Branch. And this is again upstream  
3 of the House of Raeford. And you can see that there wasn't--  
4 it doesn't indicate if any flow, very gradual flow to no  
5 flow, on this day. If you look at the shoreline over here  
6 (indicating), it's a normal shoreline. There's no sludge  
7 deposit along that shoreline. This is just a muddy bank.

8           We have a Barbie jeep over here that's stuck in  
9 this downfall. And if you'll notice--so there's a stream  
10 obstruction right in this area (indicating). You don't see  
11 any sludge or you don't see any of this brown material, any  
12 of that brown sludge, the slick, the greasy slick.

13           There's not even any duckweed growing on this  
14 date, and this is on the 15th. The first day that we went  
15 out was on--that I had investigated the spill was on  
16 September 10th. And there was--there's no duckweed. There's  
17 no sludge. You see a very nice, crisp reflection in the  
18 water. You can actually see the leaves of the trees.

19           And had we had a sludge move down from upstream to  
20 deposit itself or surface behind the House of Raeford, you  
21 would have definitely seen a fingerprint in these photos.  
22 You would have seen evidence of a slick because wastewater is  
23 not going to move nice and neatly in a plug flat fashion down  
24 a creek.

25           It gets--it's going around. It's meandering down

1 this creek. I mean this creek actually meanders. It's got  
2 some twists and turns to it. There's vegetation. There are  
3 places where sludge would be trapped in debris or overhangs  
4 in the creek, and you don't see any evidence whatsoever that  
5 any wastewater had passed through this point.

6 (Pause.)

7 Is that figure I?

8 Q Yes.

9 A Well, I don't have Figure I. I go from Figure H  
10 to Figure M. But I can talk about that--I don't know which  
11 figure it is. If you want to tell me what figure it is, I  
12 can talk about this.

13 Q Well, it's actually--I go from H to M also. I  
14 don't have Figure I, J, K, or L.

15 A Oh. Maybe they're further back. I'm sorry.

16 Ms. LeVeaux: Your Honor, if you'll just give  
17 me a minute?

18 (Pause.)

19 Q Yeah, there it is. It's behind--behind R is L and  
20 K and I and J. So if you'll put it in its rightful order and  
21 that's what you have right there. I apologize.

22 (Pause.)

23 Q If you'll describe for the Court Figure I, please?

24 A Figure I. Okay. Figure I is a photo taken on  
25 September 11th. And this is in the vicinity. This is

1 actually on House of Raeford property from--this is--I'm  
2 standing on the west side of the bank of Cabin Branch taking  
3 a photo towards the east, facing east. And you can see we're  
4 in a bend of the river. We're in the bend of the creek here.

5           And this location is actually downstream of the  
6 adjacent ditch that runs right next to the House of Raeford  
7 lagoons, and it's the adjacent ditch that is located south of  
8 the two lagoons. And we've talked about this ditch. It's a  
9 deep drainage ditch and it comes in actually a little bit  
10 upstream, just a little bit upstream, this direction  
11 (indicating).

12           And this is the first time that we see sludge, any  
13 evidence of waste, in the creek. And you can see it  
14 deposited out here on this shoreline, on the lazy side of the  
15 shoreline. And it's in a kind of a thin, but uniform  
16 floating scum along the top of this water.

17           And it's brown in color. This photo gives it sort  
18 of an appearance of gray, but it's kind of a--it's sort of a  
19 brownish gray. But it's--this is actually what would look  
20 like a fresh sludge. And it is deposited on the slow side of  
21 the creek, on the inside bend.

22           Q     Now, Linda, you said that a fresh sludge had a  
23 foamy look to it and this doesn't look foamy. Is it in fact  
24 foamy?

25           A     No, this isn't--it doesn't look foamy, but it is

1 floating and it's--it's still a fresh sludge and you can tell  
2 by the color of this sludge. The fact that it's floating  
3 also tells me that it hadn't been sitting here for a long  
4 period of time. This isn't something that you would see that  
5 would come down from upstream. This isn't something that  
6 would be--this isn't what a sludge would look like that would  
7 be--I've heard testimony that material like this can  
8 resurface through getting entrained, like nitrogen in it.

9           By the time you start seeing--if it was an old  
10 sludge, it would not be this light color. Sludge gets very  
11 dark the older the sludge gets. It gets dark. And sludge  
12 tends to sink after time. This sludge was floating all along  
13 the edge here. Now, this is a shallow edge. This part of  
14 the creek here is real shallow in this area. So it's  
15 basically kind of deposited out. It is floating, but it's a  
16 very shallow part of the creek right here.

17           Q     Now, you said this was on House of Raeford's  
18 property. Again, it's not directly behind--this is not the  
19 piece directly behind the lagoon, is it?

20           A     Yeah, it would be behind the lagoon. It's---

21           Q     (interposing) But this is--I'm sorry.

22           A     Yes, it would be--it's still behind the lagoon,  
23 but it's right at--where we started seeing this was basically  
24 at the intersection of the drainage ditch and Cabin Branch  
25 and right directly behind the--I mean behind the lagoons. If

1 I--there may be a better--there may be a map that I could--if  
2 I could use that big map, I'd like to show you where that is  
3 at, maybe on that--could I use that big map?

4 Ms. LeVeaux: Do you mind, Henry?

5 Mr. Jones: No.

6 Q This one (indicating) or this one (indicating)?

7 A That one (indicating).

8 Q This one (indicating)?

9 A Uh-huh.

10 (Witness approaches photograph.)

11 Q And just describe for the Court north, south,  
12 east, west, as you speak, so that the court reporter can get  
13 that.

14 A Where that location would be is--it's at the  
15 corner of the secondary lagoon at the south corner. If you--  
16 if you can follow--if you can see in this photo, there's kind  
17 of a hook right here. There's kind of a bend.

18 And this is the ditch that we've talked about a  
19 few times, this ditch that runs alongside the lagoon, down  
20 the south side of the lagoons, runs all the way from  
21 basically Highway 117 and beyond and west. But it comes all  
22 the way out into Cabin Branch at about this location, but the  
23 creek actually hooks a little bit right in here (indicating).  
24 And there's an area--there's a low area right here  
25 (indicating).

1           As a matter of fact, I parked my vehicle here  
2 (indicating) and preferred parking my vehicle here when I was  
3 conducting investigations because I did not like driving the  
4 vehicle on this dike wall back here (indicating). And it was  
5 getting--because the dike wall was getting pretty muddy up at  
6 the northeast corner. But anyway, so the creek hooks right  
7 there. So what you're seeing in this photo is the bend in  
8 the creek, but that's where it's located relative to the  
9 lagoons at the House of Raeford facility.

10           (Witness returns to stand.)

11           And so this is a close-up of the sludge deposit  
12 along the east side of the creek in that same vicinity. This  
13 is just a close-up catty-corner and would be just about--it  
14 would still be downstream of that adjacent ditch that comes  
15 in along--south of the two lagoons.

16           And you're looking at the east shoreline and you  
17 can see where sludge has deposited out in this low area where  
18 the creek's not really flowing well. And there wasn't much  
19 flow, if any, in the creek, but whatever flow there was, this  
20 is the deeper part of the creek right there where this arrow  
21 indicates. I'm messing up the map.

22           But you can see that the sludge has deposited out  
23 all along the edge right there where the creek slows down.  
24 So I would have expected in my investigation that--had the  
25 point of origin been upstream of the location right here

1 behind the House of Raeford, I would have expected to see  
2 signs of sludge deposits everywhere in the vicinity where the  
3 creek bends and turns and slows down in the area where the  
4 vegetation is overhanging. And any area where you've got  
5 downfalls or vegetation that's hanging into the creek, it  
6 would have hung up into that vegetation. We should have seen  
7 something upstream.

8           And of course our DO would have indicated that  
9 this sludge had moved through the area because it--one of the  
10 things that wastewater does is it causes microorganisms to  
11 grow in the water and they're there--that's Mother Nature's  
12 way of taking pollutants out of water.

13           So the microorganisms that are already indigenous  
14 to that water, they're feeding on that waste material. And  
15 microorganisms are just like we are, Judge. They have to  
16 take in food and they also breathe oxygen or some kind of--or  
17 can rob oxygen from compounds that might have oxygen present  
18 in them like nitrate. But nonetheless, they're going to  
19 consume oxygen as the microorganisms are consuming this waste  
20 material and they're going to deplete the oxygen.

21           And one of the things that you've heard in every-  
22 body's testimony is that this creek is flowing very slowly.  
23 There was good oxygen content just upstream in the tune of  
24 about 4.7 to 4.9 milligrams per liter. So it's helping to  
25 bring a little bit of fresh dissolved oxygen in there.

1           But what our data shows is that from the point of  
2 House of Raeford you could see, especially where this sludge  
3 was standing and was located in the creek, the dissolved  
4 oxygen was beginning to drop. It went from 4.9 just upstream  
5 to about 2 milligrams per liter right behind the House of  
6 Raeford facility. And then shortly downstream, we had no  
7 dissolved oxygen. It was down to .1, .2 milligrams per  
8 liter, which is basically nothing.

9           We would have had--we would have had that same  
10 condition just upstream in the creek had we had a waste  
11 material, especially of this magnitude, come down this creek  
12 system from up above. There is no--absolutely no way that  
13 this material came from upstream.

14           Q     Okay. Let me take you to the next slide. Now, is  
15 this what you observed?

16           A     Yes. This is--now, this is located right directly  
17 behind the House of Raeford's secondary lagoon. It's  
18 basically at that little north point that sticks out from the  
19 secondary lagoon. And this is standing at the secondary--at  
20 that point---

21           The Witness:           If you'd like me to approach  
22 the map and show you on the map, I can show you, Your Honor.

23           The Court:           All right.

24                   (Witness approaches photograph.)

25           A     That's standing right at the northeast point of

1 the secondary lagoon, and we were actually down on the bank  
2 of Cabin Branch at that location standing and looking  
3 directly down at the creek.

4 (Witness returns to stand.)

5 And what the photo indicates is that there is a  
6 heavy sludge deposit in that creek from bank to bank. You  
7 can actually see the ripples of the sludge down here in that  
8 lower left-hand corner. You can see actually how--just some  
9 indication of the thickness of that sludge from the cracks in  
10 it. This is a very dense, thick sludge from bank to bank.  
11 And when you look at some other photos down, it's as far as  
12 the eye can see from that particular location.

13 Q Ms. Willis, do you know the approximate width of  
14 this stream at this juncture?

15 A It's probably about 20 feet, probably about 20  
16 feet--20, 25, maybe.

17 The Court: Did this have an odor?

18 The Witness: No, it didn't have an odor,  
19 Your Honor. It was--and that's why--that's another sign of a  
20 fresh sludge. And the funny thing about wastewater is that  
21 if it's a fresh wastewater, one of the ways as--doing--I've  
22 done compliance evaluation inspections at wastewater treat-  
23 ment plants for eight years plus. And one of the indicators  
24 of whether they're maintaining a good fresh wastewater is you  
25 can tell by the odor.

1           And one of the advantages to keeping a fresh  
2 wastewater is that it doesn't--it doesn't create like toxic  
3 materials where the wastewater treatment plant--for instance,  
4 for wastewater treatment plants that have sludge holding  
5 basins, in order to keep odor down, they'll aerate it and mix  
6 it.

7           But one of the things that indicates that it is a  
8 fresh wastewater, especially since this isn't being aerated  
9 and it isn't being mixed here, is that--the only way it can  
10 have this appearance and not have some kind of odor is that  
11 it was just freshly put there. It has been freshly generated  
12 and it is--it is a fresh--what we would consider a fresh  
13 wastewater. If it was a wastewater that has been there for a  
14 long time, it's going to have an odor if it's not being  
15 aerated.

16           The Court:                   What did the anonymous call  
17 complain about?

18           The Witness:               Well, they did mention that  
19 there was a foul odor and which puzzled--that puzzled me, why  
20 they would call--why they would say that there was a foul  
21 odor there. I don't know if they--I don't really know why we  
22 got the complaint that said a foul odor.

23           But Kenneth Rhame also, with the EPA, stood on the  
24 bank of this creek and looked at me and said, "Why doesn't  
25 this stuff stink?" But there was no odor and as a matter--

1 okay. But there wasn't an odor.

2 A And this is a picture of Cabin Branch taken on  
3 September 11th. And this is where I've leaned over to try to  
4 take a snapshot view downstream. And of course you can see  
5 the sludge just as far as the eye can see, all the way down  
6 the creek, continuous from bank to bank. And this is  
7 actually the downstream, so we're looking in a--kind of a  
8 northerly direction. We're actually looking north up--or  
9 down---

10 Q (interposing) Northerly because Cabin Branch---

11 A (interposing) Yeah.

12 Q ---flows north?

13 A Right. We're looking north and we're looking  
14 downstream. It's a downstream view of Cabin Branch. And I'm  
15 still in the vicinity right there at the corner of that  
16 primary--that secondary lagoon.

17 Q And I can't really tell, Ms. Willis, but is it  
18 bank to bank down there? I can't really tell.

19 A It's bank to bank. Oh, yes. We walked down it,  
20 so it was. It was full. And this is an upstream view at  
21 basically the same location I pointed out on the map at that  
22 northeast corner, that tip of that secondary lagoon. And  
23 that's turning and facing the--upstream.

24 And so you can see this is the--the creek kind of  
25 bends or flattens out a little bit right there behind that

1 point. So you don't get to really see the good--you don't  
2 get a good long shot view upstream from that particular  
3 location, but you sure can see a good view downstream.

4 Q Show me on the map where this is upstream because  
5 upstream is confusing. I don't know if you're talking about  
6 upstream of the House of Raeford facility so going towards  
7 Cabin Branch or are you just talking about upstream from  
8 where you were--just where were you?

9 (Witness approaches photograph.)

10 A I was standing right here (indicating), again, at  
11 this point at the lagoon, this northeast corner of the  
12 lagoon. And so you can see that the creek kind of bends in  
13 at that--it starts to bend back in and head west a little bit  
14 along--if follows the edge of that lagoon. So you can't  
15 really snap a good upstream photo at that particular  
16 location.

17 But we basically were seeing--where we saw and Mr.  
18 Howard also pointed out the point of origin of this sludge  
19 was at this location here (indicating), which was next to  
20 this adjacent ditch that's located south of the House of  
21 Raeford primary and secondary lagoons. And then it was  
22 pretty much thick and solid from shore to shore all the way  
23 down to about the confluence of the pond down here  
24 (indicating) where the--where this--where Parker Bark's last  
25 little amenity pond there meets Cabin Branch.

1 (Witness returns to stand.)

2 That's a picture standing at that same location at  
3 that little northeast point there where I've pointed the last  
4 couple of times I've referenced to where my photos were  
5 snapped.

6 I'm now standing, though, on--rather than down on  
7 the creek bank, on Cabin Branch Creek bank, I'm standing  
8 actually on the dike wall, that far dike wall of the  
9 secondary lagoon. And then you see in the background, way in  
10 the background there, is the House of Raeford chicken  
11 processing plant. And you can see the dike wall that's  
12 located in between the primary and the secondary lagoon, and  
13 that's right in here (indicating). You can see the overflow  
14 pipe in that--right there (indicating) in that photo in that  
15 location.

16 Q So this is the secondary lagoon?

17 A This is a picture of the secondary lagoon, yes.  
18 And this is the pump house for--this is where they pump water  
19 from the secondary lagoon over to the storage lagoon.

20 Q And where is Cabin Branch?

21 A And Cabin Branch would then be--I'm taking a photo  
22 standing on that dike wall facing west or towards Highway  
23 117. And Cabin Branch is directly to my back, right behind  
24 me, no more than probably 30 feet, 25 feet.

25 This is a picture of one of the open areas of

1 lagoon number 1 at the House of Raeford facility. And just  
2 for reference, if you look at this little thing back here  
3 that I just put a green mark over, that's actually the pump  
4 house.

5           So for reference if you're, you know, thinking  
6 about the last photo, just to give you some perception of,  
7 you know, where I'm standing at this location, I'm more  
8 towards the front of the primary--first primary lagoon. And  
9 I'm facing east, basically probably about due east. I'm  
10 looking east.

11           And what you'll notice is the floating sludge  
12 that's in this primary lagoon in the open area here  
13 (indicating). And what you should also notice is how dense  
14 the vegetative growth is in this primary lagoon.

15           Q     Can you point out for the Court--I don't know if  
16 you're able to--the parameters of the lagoon because that  
17 just looks like a field to me behind this area?

18           A     The parameters?

19           Q     Uh-huh, of the lagoon.

20           A     Do you mean the perimeter?

21           Q     Is that the lagoon back there where that growth is  
22 or is it just a big field?

23           A     Oh, no. Well, the--well, it's hard to see.  
24 Really it's hard to see from this photo because the vegeta-  
25 tion is so tall and it's so dense. It's hard to--you can't

1 see--I mean basically you see where the tree row is right--in  
2 this photo there's a tree row back here. And that tree row  
3 is along the--it's on the south side of the road that  
4 travels--there's a road that goes all the way around this  
5 lagoon. So there's a road right at the base of these trees,  
6 basically, that goes along that way.

7           And so I'm standing at the--just to give you some  
8 perspective of what you're looking at here and where I'm  
9 standing, I'm kind of at the--I'm at the northeast--more at  
10 the northeast corner of that primary lagoon and I'm taking a  
11 picture across the lagoon looking east and a little bit  
12 south, south and east.

13           But one other thing I want to bring to your  
14 attention too is that look at how the sludge in this lagoon  
15 is kind of beginning to get crusty. I mean look at it. It's  
16 kind of getting crusty in here, and you'll notice that there  
17 are areas where it's beginning to turn colors. The sludge is  
18 actually darkened in this area. It's a darker color than  
19 what it is in some of these other areas where it's a lighter  
20 color, which is also--speaks to how sludge--you know, the  
21 changes that you can see, the differences that you can see in  
22 the color of sludge as with age. Okay.

23           This is a close-up view of the sludge in the  
24 primary lagoon. And what I tried to do is get a close-up  
25 view of--it kind of has that foamy, frothy look. And it

1 also--you can get some indication of how--you know, that it  
2 does float. It's a floating sludge. And also notice how  
3 turbid the waste--when you can see actual wastewater, because  
4 there is wastewater in here with this sludge. This isn't all  
5 100 percent sludge in this lagoon. There's wastewater mixed  
6 with sludge. The sludge is floating on the surface. The  
7 reason why this sludge does float is because it's entrained  
8 with a lot of oils and grease.

9           Really this kind of material should be pulled out  
10 in the DAF unit, but there is a lot of this floating sludge  
11 in the lagoon. And if you notice over here on that little  
12 right corner of the picture, you can see that the wastewater  
13 is kind of brown in color and it is very turbid. It isn't  
14 clear. It's a turbid--very turbid color, turbid look to it.

15           One other thing that I would point out here too is  
16 that we're also looking at the vegetation right along in here  
17 (indicating). I'm actually standing on the dike wall here  
18 and you can--this does give you some indication of how high--  
19 what the level of that sludge is in this lagoon.

20           You don't really see a dropoff or a--you don't see  
21 a difference in--in other words, that sludge level is not  
22 like seated down inside the lagoon. It is actually sitting  
23 right at the surface of the dike wall in this particular  
24 location, which is located on the northwest--it's actually  
25 kind of in the center, maybe 400, 500 feet from the west--

1 furthest west end of that primary--or east end of that  
2 primary lagoon.

3 Q East end or west?

4 A Yeah, I can probably show you on the map  
5 approximately where that photo was. But we have another  
6 photo that shows the locations of where I snapped pictures,  
7 but---

8 Q (interposing) Okay. Yes, we do.

9 A This is a photo taken on September 15th. And this  
10 is--I've actually walked down towards the Parker Bark  
11 facility, which would be downstream from the House of Raeford  
12 or walking basically north along Cabin Branch. And I'm  
13 standing on the west side of the creek. And now I'm turning  
14 towards the south. I've turned towards the south and I've  
15 snapped a picture of what the creek looks like upstream. And  
16 so House of Raeford facility is down in this direction down  
17 here (indicating).

18 And the Parker Bark facility, I'm getting--I'm  
19 actually walking closer to or perhaps I'm probably on the  
20 Parker Bark--adjacent to Parker Bark property. But again, at  
21 this location--and this could be anywhere from 600 to 700  
22 feet probably from the House of Raeford property line.

23 And you can again see just how thick this sludge  
24 is. It looks like a road. I mean it doesn't even look like  
25 a creek. It looks like you could just drive down it. But

1 that is all sludge from bank to bank, consistent on the whole  
2 entire surface of that creek, Cabin Branch.

3           This is a photo taken on September 17th and this  
4 is also--now I'm--this is a photo where I'm standing on House  
5 of Raeford property. And I'm standing at the--once again,  
6 that back northeast point of the secondary lagoon. I'm  
7 actually down on the creek bank, as you can see. I'm  
8 snapping the photo, which would be facing basically north or  
9 downstream.

10           Now you can see what the sludge--the sludge has  
11 taken on a completely different appearance. As a matter of  
12 fact, the sludge is no longer floating now. It's not this  
13 nice, thick, fluffy mat of sludge standing on the surface of  
14 the creek. It is now in the process of going through  
15 anaerobic decay because there's no oxygen there in the water  
16 at this point.

17           It has decomposed. The creek--you can see the  
18 color of the creek is basically very dark. It's black. If  
19 you can draw your attention to--I'll just circle one like  
20 that--that area right there (indicating), the creek is  
21 actually--it looks like it's effervescing. It's actually  
22 bubbling quite a bit.

23           And what's happening there is that this wastewater  
24 sludge has settled--has settled into the bottom or decomposed  
25 down. Since the creek's not moving, you're getting anaerobic

1 decomposition. And what that likely is due to, it could  
2 mostly probably be methane gas from the decomposition of the  
3 organic materials. So that's actually--those are--that's gas  
4 formation. And it was just--it was boiling. It was just  
5 boiling.

6           And that's another--a little better close-up of  
7 the septic conditions in the creek. And so that--and that is  
8 only--if you compare that to the photos on the 11th, that's  
9 only six days later. And as a matter of fact, I told Clay  
10 Howard the creek was going to look exactly like that in just  
11 a few short days. I described it to a T to him, that "This  
12 is what you're going to see in this creek."

13           Q       Did you start to notice an odor at this juncture?

14           A       Well, you know, not really. I mean there wasn't  
15 really--there wasn't really what I'd consider, you know, like  
16 a real foul odor even at this point. It wasn't like--it  
17 wasn't like smelling a sewer gas, nothing like--nothing like  
18 a sewer gas, which a sewer gas is basically hydrogen sulfide.  
19 And it wasn't that hydrogen sulfide smell, which is just  
20 sewer gas smell, putrid, you know.

21           Mr. Jones:            Could I ask your indulgence on  
22 something? I just looked at my watch. I'm a few minutes  
23 late taking some medicine. Can I step outside and do that,  
24 just for a second?

25           The Court:            Sure, sure.

1           Mr. Jones:           I'll be right back.

2           The Court:           Okay. We'll have an in-place

3 recess for a minute. Do you need to step down as well?

4           The Witness:         No, thank you. I'm fine.

5           (Pause.)

6           Mr. Jones:           Thank you, Your Honor.

7           The Court:           Sure. This hearing will come

8 to order. It's now nine minutes after 4:00 on November 30th,

9 2011. All persons present when we recessed briefly are again

10 present. You may continue.

11           Ms. LeVeaux:         Thank you, Your Honor.

12           By Ms. LeVeaux:

13           Q       Ms. Willis, could you describe what you have

14 before you? It is Respondent's Exhibit Number 14U.

15           A       This is a picture of the weir structure. And it's

16 in--it's located on the dike wall between the primary and the

17 secondary lagoon. And you're basically--this photo is facing

18 the primary lagoon.

19                   Notice all the thick vegetation all in the

20 vicinity of this weir structure, and recent construction, of

21 course. You can see that this was recent construction.

22 That's the outlet pipe on the secondary lagoon side.

23           Q       So is this the same picture? You just turned the

24 other way?

25           A       Yes. This is looking at the outlet structure

1 for--the weir structure has the--you saw the--there was a  
2 wheel there that allows a gate to be opened so that they can  
3 control the level of the lagoon. And this is the outlet  
4 structure from--and it's basically a culvert that's in the  
5 subground between lagoon 1 and lagoon 2 on that dike wall.

6           This picture was taken at the corner--at the  
7 northwest corner of the secondary lagoon facing towards the  
8 dike wall in between the primary and the secondary lagoon.  
9 And it's a photo of the dike wall itself between the primary  
10 and secondary lagoon and that overflow at that discharge  
11 outlet into the secondary lagoon.

12           Q     And the primary lagoon is where?

13           A     The primary lagoon--where this tall row of vegeta-  
14 tion is back here (indicating), that's where the primary  
15 lagoon starts. And it's all the--the primary lagoon is  
16 in--oops, am I going too fast for this thing--in that  
17 direction. Okay. So the primary lagoon is back towards--  
18 we're seeing the furthest east edge of that primary lagoon  
19 where you see that row of vegetation.

20           Q     This is the secondary lagoon and you're looking  
21 over at the other side; is---

22           A     (interposing) Right.

23           Q     ---that right?

24           A     Yeah. I'm referring--the vegetation I'm referring  
25 to is that vegetation in the primary lagoon. But this--what

1 you see in the foreground with the liquid there---

2 Q The secondary lagoon?

3 A ---is the secondary lagoon, yes.

4 Q Are you on the Parker Bark side or are you on the  
5 opposite side?

6 A I'm standing on the Parker Bark side. I'm on the  
7 north side of the secondary lagoon. I'm standing on the  
8 north side.

9 Q Now, the Parker Bark side, describe for the Court  
10 what that side looks like.

11 A What the site looks like?

12 Q What that side looks like. Is it lower? Is it  
13 higher?

14 A It is higher. The berm--and the berm wall  
15 actually is depressed along the northwest corner, along that  
16 northwest--on the northwest edge of the primary lagoon--can I  
17 approach the map? It would be easier for me to show you.

18 Q If you feel that would help illustrate your  
19 testimony.

20 The Court: That will be fine.

21 (Witness approaches photograph.)

22 A So you asked where--what the dike wall looked like  
23 along the Parker Bark side of the lagoon. And so the  
24 northeast--excuse me, northwest end of the primary lagoon is  
25 right in this location (indicating). And in this location in

1 here (indicating), the--there's a road that goes all the way  
2 around both lagoons. And then you have the dike wall in  
3 between the primary and the secondary lagoon, and you can  
4 actually drive on it as well.

5           But this edge over here (indicating) on the north  
6 and west end of the primary lagoon is pretty low. It's very  
7 low compared to say the opposite side or even any of the  
8 areas around the secondary lagoon. The dike wall is higher,  
9 but the dike wall--Parker Bark runs a lot of real heavy  
10 equipment in here. They've got some heavy front end loaders.  
11 And they've had occasion to--when they turn this equipment  
12 around, you can see Parker Bark does have mulch materials  
13 right here (indicating), right on the property line  
14 basically, and right on the edge of that road. And it looks  
15 like that area right along that northwest side of the primary  
16 lagoon is very low.

17           (Witness returns to stand.)

18           And as a matter of fact, one of the photos that I  
19 pointed out how high the wastewater was in that particular  
20 location of the lagoon was it was right at--in other words,  
21 if the lagoon were ever to top over, that would be the point  
22 that it would overflow in this lagoon system would be right  
23 there---

24           Q       (interposing) On the Parker Bark property?

25           A       Yes. If it were to overflow--if the lagoon levels

1 were high enough to overflow, where they would overflow is  
2 going to be along the lowest area of the dike wall. And that  
3 would be the location I would expect to see wastewater spill  
4 over if it were to.

5 Q Do you know whether or not they put a fence there?

6 A They have--the last time I was at the facility  
7 they were working on a large--a very large fence to keep the  
8 heavy equipment from Parker Bark's facility from coming onto  
9 that road--dike wall.

10 Q Looking at the next exhibit, Figure X?

11 A This is a photo taken on September 15th. I'm  
12 standing on the dike wall between the primary lagoon and the  
13 secondary lagoon. The primary lagoon is on the left-hand  
14 side of this photo where that dense green vegetation is  
15 growing. And notice that that vegetation is snugged right up  
16 to the edge of that dike wall on the left-hand side there and  
17 just as thick as could be. I mean it's thick.

18 There are a little bit of areas there where--okay,  
19 where I'm talking about is right in here (indicating).  
20 There's a little area here where it looks like maybe it's  
21 been pushed out a little bit.

22 But now on the right-hand side is the secondary  
23 lagoon. And I'm actually facing north and I'm facing towards  
24 the Parker Bark facility. And you can see the piles of mulch  
25 over here (indicating). In the left-hand side of the photo

1 there's a big pile of mulch and then a smaller pile of mulch  
2 there (indicating). And right behind the front end loader,  
3 the picture where the front end loader is, there's another  
4 pile of mulch right there right behind that front end loader  
5 on the Parker Bark facility.

6           That was--this is a photo taken on September 15th.  
7 This is Figure Y, Exhibit Figure Y. The photo was taken on  
8 September 15th. I am standing at the east-northeast corner  
9 of the primary lagoon. I'm not right at the corner. I'm a  
10 little off the corner there because you can see over here  
11 (indicating) this is where Parker Bark's facility is, over  
12 here with the stacked-up mulch.

13           Over here in that upper right-hand corner of that  
14 photo you can see some mulch. The road is just to the south  
15 of that big pile of mulch. And it's a photo of a hose with a  
16 quick fit connection on it. And it's going into that primary  
17 lagoon in a very heavily vegetated area.

18           And this is another photo taken on September 15th  
19 of the sludge in the primary lagoon. It's probably in about  
20 the same--I'd probably have to refer to a photo of my--I mean  
21 a map of where the photo locations are. But it is--I am  
22 standing on the north side of the primary lagoon and I'm  
23 facing--I'm looking south and east, kind of in a southeast  
24 direction; another view of the sludge in that primary lagoon.

25           Q       Do you want to look at Exhibit 12 in the

1 Respondent's trial notebook? Actually it has the streams,  
2 but I think it's 11 or 12. It's right--look at 11 or 12. I  
3 think one of those is a map--or even 10. You can let the  
4 Court know which one so that the---

5 A 11 or 12?

6 (Witness peruses documents.)

7 Q Do any of these exhibits correspond to these  
8 photos?

9 A Yeah. Uh-huh.

10 Q I'm not sure if--and tell the Court if it responds  
11 (sic) to these photos or maybe it responds (sic) to the Cabin  
12 Branch walk. I'm just not---

13 A No. This would be--let's look at Exhibit 11B.  
14 And 11B would be probably in that location of the photo Q.

15 (Witness peruses document.)

16 Q So in 11B, where would Figure Z be located?

17 A Figure Z? Figure Z. Oh, yes. That's--that would  
18 be that location photo Q.

19 (Witness peruses document.)

20 Let me refer back. It's either Q or P. It could  
21 be Q or P, but it's over--there's only a couple of photo  
22 locations that I snapped that are on that side. Give me a  
23 minute.

24 Q Okay. Well, we can figure that out---

25 A (interposing) Okay.

1           Q     ---and come back to it later. We can figure it  
2 out if---

3           A     (interposing) I'm basically standing on---

4           Q     ---it's important to see where it is.

5           A     I'm basically standing on the north side of the  
6 primary lagoon. And it's hard to tell, you know, from the  
7 photo basically how far west I am on that dike wall because--  
8 you kind of lose your reference a little bit because of that  
9 thick vegetation. It's hard to see like the corner--the  
10 far--it's hard to see that. You can't see the far corner of  
11 the lagoon where it ends or---

12          Q     (interposing) Okay, okay. But again, this is a  
13 picture of the lagoon; is that correct?

14          A     Yes, the primary lagoon.

15          Q     The primary lagoon; correct?

16          A     Yes.

17          Q     And if you turn to the next exhibit, AA?

18          A     This is--which exhibit is this? I'm sorry.

19          Q     Well, it should be AA. Just a minute.

20                   (Pause.)

21          Q     AA.

22          A     Figure AA is a picture of an outlet pipe coming  
23 into a small--I'll call it a receptacle for skimmings from  
24 the dissolved air flotation device.

25          Q     Where?

1           A     At House of Raeford, yes. It's--they have a  
2 dissolved air flotation device. The wastewater comes into  
3 this structure (indicating). And the purpose of the  
4 dissolved air flotation device is to bubble diffused air up  
5 through the wastewater.

6                     And the idea there is to trap grease and oil from  
7 the wastewater to try to remove grease and oil from the  
8 wastewater because that's not something that you want to try  
9 to spray to a--to spray irrigation fields because oil and  
10 grease will plug the spray nozzles and the spray lines and it  
11 makes it difficult for them to spray. Really their intent is  
12 to spray wastewater. It's not to spray the skimmings from  
13 the DAF.

14                     So this is the dissolved air flotation unit. And  
15 you can see what for reference--if you look at the material  
16 sitting in that receptacle right there just below that pipe,  
17 that's what the real fresh skimmings are going to look like  
18 coming off this DAF unit.

19                     And that is the sludge material that the--this  
20 material goes into the tank behind it, this tank right here  
21 (indicating). There's a tank sitting directly behind it.  
22 It's a storage tank for the skimmings off the DAF unit. And  
23 then those skimmings are sent to the rendering--to a  
24 rendering plant to be rendered so it can be--basically it's a  
25 recyclable, if you will, material.

1           But it is a material that is wasted out of the  
2 wastewater treatment--it's wasted out of the wastewater  
3 because it causes problems for spraying it to the spray  
4 irrigation fields, and also it does create problems--if your  
5 dissolved air flotation unit is not working real well, you're  
6 going to end up with this kind of sludgy floating sludge in  
7 the primary lagoon.

8           And it's better to have it in the primary lagoon.  
9 You don't want it in the secondary lagoon because the  
10 secondary lagoon is then going to pump over to the storage  
11 lagoon, so--and which is another reason why they would put in  
12 this weir structure. The weir structure helps to hold--if  
13 you get this kind of material depositing in a primary lagoon,  
14 if you have that weir structure in, they can control--they  
15 can keep this kind of material out of that secondary lagoon,  
16 but--so this is---

17           Q       (interposing) So if this were to go in the  
18 secondary lagoon, would it clog--could it possibly clog the  
19 pipes that take it over to the storage facility?

20           A       I think probably the pump--probably the pumps and  
21 line to get it over to the storage lagoon is not so much the  
22 problem. But the problem comes when you try to spray it to  
23 the fields. It can--grease and oil can clog the spray  
24 nozzles, can, you know, plug the spray--the nozzles from the  
25 big spray arms and whatnot. And so it does create problems.

1 This is the kind of--this is sludge that you want to take out  
2 of the wastewater system, and they do have a means for  
3 disposal to the rendering plants for that.

4           But I'd like to draw your attention to how--now,  
5 this really does look like a milkshake, if you will. It is  
6 very light brown. You can see how--and this is what it looks  
7 like when it is very fresh. When it's real fresh, it's a  
8 very light tan color like this.

9           And as this type of material ages, it's going to  
10 get darker. It kind of turns--it goes from a nice creamy  
11 brown, kind of milkshaky-looking color, to a grayer and then  
12 eventually to--it gets that black crusty look to it like we  
13 saw in pictures in the primary lagoon. You could see like a  
14 black crust beginning to start on the surface of it, to  
15 eventually it going septic and basically turning black like  
16 what we saw---

17           Q     (interposing) It could drop---

18           A     (interposing) Yes.

19           Q     Does it drop or---

20           A     (interposing) Yes.

21           Q     ---no longer stays on the surface; correct?

22           A     Right. And also notice too, if you will, the--if  
23 you look at this DAF--you can see a portion of the actual--  
24 the DAF unit itself. And you can see the weir. This is a  
25 weir inside the DAF unit right here (indicating). I won't

1 draw over it.

2           But you can see these little like plates sticking  
3 up so many inches apart. And this is where--when the waste-  
4 water comes into this DAF unit, it ends up going probably up  
5 underneath a baffle wall, I believe this right here  
6 (indicating). That metal--that little metal structure right  
7 there is like a weir.

8           And the wastewater would come up underneath, and  
9 then it--this is the--what you're seeing here is the  
10 wastewater flowing over the effluent weir. And then that is  
11 the wastewater that you want to send, and that they do send,  
12 over to the primary lagoon. But this is oxygenated  
13 wastewater. It's been entrained with diffused air.

14           (Pause.)

15           Q     And if you'll turn to Respondent's Exhibit 15?

16                     (Witness complies.)

17           Q     LW1?

18           A     Uh-huh.

19           The Court:           And I'd like to move through  
20 these a little quicker, if we can.

21           Ms. LeVeaux:         Okay.

22           The Court:           Thank you.

23           A     This is another photo view of--I have a lot of  
24 pictures, of course, of the sludge in the creek. And this  
25 was taken on September 11th. I'm standing on the west bank

1 of Cabin Branch in the vicinity behind the House of Raeford  
2 lagoon, and I'm--and I've snapped the photo looking  
3 downstream.

4           Again, a close-up of the sludge that's located  
5 just upstream of where you see the very thick mat of sludge.  
6 And it's--this is sludge. This is a sludge skimming--the  
7 sludge--it's sludge that's laid out here on the west side of  
8 the creek. It's deposited a film of that sludge along that  
9 west side of the creek.

10           And this is going to be right in the vicinity of  
11 the footbridge. You can see the little footbridge. It's  
12 right there in the lower right-hand corner of the photo. And  
13 that little footbridge takes you over to where Mr. Teachey  
14 takes samples from a monitoring well.

15           Another photo of Cabin Branch looking upstream  
16 from behind House of Raeford lagoons at that northwest--  
17 northeast corner of the secondary lagoon, actually on the  
18 creek bank; and another photo of the same, a little more of a  
19 close-up. I'm trying to zoom in just a little bit; another  
20 photo of the sludge, a close-up of the sludge right there  
21 behind House of Raeford lagoons.

22           And this is downstream looking--I'm standing on  
23 Sheffield Road bridge looking upstream towards the House of  
24 Raeford facility, which would be up that direction  
25 (indicating). And you can see the film again, this film,

1 this biomass, greasy-looking film on the surface of the  
2 water.

3 Q Is there a change in color in this number 7?

4 A In number 7?

5 Q Is there any change in color?

6 A It's--well, it's--it's more of a--kind of like a  
7 biomass, what you'd expect when you get a lot of growth of  
8 microorganisms feeding on a waste source. So it has kind of  
9 brownish color to it.

10 Q And where is this taken? Do you know?

11 A Number 7?

12 Q Uh-huh.

13 A No. Number 7 is the sludge. That's actually a  
14 picture of the sludge right behind the House of Raeford  
15 primary--or secondary lagoon.

16 This is standing on the dike wall on the northeast  
17 corner of the secondary lagoon. And that's just--basically  
18 just a picture basically of the dropoff. You go from the  
19 dike wall straight down to basically the creeks just down  
20 below through that vegetation.

21 And that's another view of--this is taken at--  
22 that's the Beaverdam Creek. And I'm not quite sure if this  
23 is actually Brooks Quinn or Sheffield. I believe it's  
24 probably Brooks--the Brooks Quinn bridge, but at any rate, it  
25 also shows this dense, uniform, kind of more or less mat of

1 organic material in the creek.

2           And that's a picture of the--just an indication of  
3 the tire tracks. It kind of shows you how wide--what this  
4 photo demonstrates is basically how wide that berm is at the  
5 back end of the secondary lagoon. This is Joe Teachey's--I  
6 think that's Joe Teachey's jeep sitting right there on the  
7 berm wall.

8           So you can see that that berm isn't--it's not  
9 tremendously wide, but that gives you some reference as to  
10 who wide the back dike wall--the lagoon dike wall is. And  
11 where you see the vegetation back here (indicating), of  
12 course that's the dropoff, okay, where the dike starts and  
13 the creek is back there.

14           Q     That's Cabin Branch right there?

15           A     No, this isn't Cabin Branch. That's the secondary  
16 lagoon.

17           Q     Okay.

18           A     Okay. Cabin Branch is on the left-hand side of  
19 that photo, but you can't see it. It's down the hill. It's  
20 just down the dike wall.

21                   And there's a close-up of the scum trough for the  
22 DAF unit. And as you can see, that's--what you have is a--  
23 it's the surface of the DAF unit. The DAF unit has a scraper  
24 arm that travels along the surface of that DAF unit. And the  
25 sludge that has surfaced in the DAF unit gets swept over into

1 that scum trough and it drops into that scum trough. And  
2 then the photo that you saw that had the little pipe that  
3 went into the little receptacle and you could see the scum in  
4 that receptacle, that's where that scum trough discharges  
5 into.

6           And there's another photo of the surface of the  
7 DAF unit. And one thing that I can--I'd like to relay about  
8 this particular DAF unit is I have had the opportunity to  
9 look at the DAF unit at Carolina By-Products. And the whole  
10 entire surface of their DAF unit is covered in scum, this  
11 sludge.

12           And so their DAF unit here is only--you can see  
13 that it's picking up--or it's generating this scum over here  
14 on just this area here (indicating). And I'm not quite sure  
15 why we're not seeing scum completely, you know, across the  
16 surface on this particular unit.

17           There's also--this is the influent where the  
18 wastewater comes into, and they've got a lot of vegetative  
19 growth in the center of that, which that's not supposed to be  
20 there. Operationally-wise, you don't really want plants  
21 growing in your DAF unit.

22           And another photo of the surface of the DAF unit  
23 looking to the left-hand side of the DAF unit. And this  
24 structure right here is a--it's a platform that you can walk  
25 across the DAF unit there so that the operator can have

1 access to the surface of the unit for O & M purpose,  
2 operation and maintenance purposes. And you can see that's  
3 the skimmer arm right there (indicating) that skims the scum  
4 off the top of that DAF unit. And the effluent--or the scum  
5 trough is right here, starting right in there (indicating).

6 That's a picture of the--I think it was the old  
7 valve that controlled the knife, the knife valve that the  
8 operator has--that the operator would use to control opening  
9 or closing the pipe in between the primary and the secondary  
10 lagoon. It's the valve---

11 Q (interposing) But you were in Mr. Teachey's  
12 deposition, were you not, and he said---

13 A (interposing) Right.

14 Q ---it's no longer used; is that correct?

15 A Yeah. He said--yes. Yeah. A picture taken on  
16 September 15th of a trailer with hose, a green hose.

17 Q Where did you see this hose?

18 A This was located on the dike wall in between the  
19 primary and the secondary lagoon. And it was on--kind of  
20 sitting more towards the north end on that dike wall between  
21 the primary and secondary lagoon; and another photo of the  
22 adjacent field that's just south of the House of Raeford  
23 facility; and another--that's another picture of the upstream  
24 location with the Barbie jeep and the creek; another photo of  
25 the field and septic conditions in Cabin Branch behind the

1 House of Raeford; the upstream location, another downstream  
2 snapshot in Cabin Branch with the sludge standing in the  
3 creek.

4 Q This is Exhibit LW21, still 15; correct?

5 A Yes.

6 Q And 22?

7 A Another picture--more of a close-up of that  
8 overflow structure, the overflow--the discharge pipe from the  
9 primary lagoon to the secondary lagoon to the dike wall.

10 Q And 23?

11 A And a close-up of the sludge in Cabin Branch.

12 Q Taken on September 15th?

13 A 15th, uh-huh.

14 Q And Exhibit 15 LW24?

15 A Another downstream view from Sheffield Road bridge  
16 looking upstream towards the House of Raeford.

17 Q Number 15-25?

18 A And another picture of the adjacent field.

19 Q And 15-26?

20 A That's a picture--we had walked--this photo was  
21 taken on the 15th. And you can see it's--there's a little  
22 obstruction there from some of the vegetation in the  
23 foreground of this photo. But you can where it's kind of  
24 open bit of a wetland area. You can see trees actually  
25 growing in the water back here (indicating). Vegetation

1 overhangs in the water.

2           This is right about at the confluence where--this  
3 is about as far as you can walk. If you walk north along the  
4 bank of Cabin Branch--starting out from behind the House of  
5 Raeford if you walk on the shoreline of Cabin Branch, you  
6 will come to this point where this right in here (indicating)  
7 is water--this is where the confluence of Parker Bark's pond  
8 comes in and meets Cabin Branch. And you can see the sludge  
9 in the water right here at this point as well, right in here  
10 (indicating). That's all sludge in the creek at that point.

11           And so it's coming around--it's basically  
12 traveling downstream. And Parker Bark's pond is kind of  
13 helping to direct it away from I guess going up into their  
14 pond because they don't really have flow there. It's just a  
15 big, you know, open pond. And so it does open up in this  
16 area and you can see a lot of kind of wetlandy-looking areas  
17 back in here.

18           But that's as far as you can walk heading north on  
19 the shoreline of Cabin Branch. At that point you either need  
20 a boat to get across that--you know, to get to the next--if  
21 there is another place that you can even get on land; and  
22 again, sludge in the primary lagoon, sludge in Cabin Creek,  
23 sludge in Cabin Creek looking downstream, and this is at the  
24 corner again of House of Raeford's facility.

25           Q       Is this Joe Teachey right here?

1           A     No, that's Ken Rhame. He's going to love me for  
2 that picture.

3           Q     Yeah, he is. Okay.

4           A     That's Ken Rhame. This is a--this is a picture of  
5 Cabin Branch from again Sheffield Road bridge looking  
6 upstream. Look at how turbid the water is again, and which  
7 is a big difference from what it looked like from the  
8 upstream photos above House of--upstream of House of Raeford;  
9 another picture close-up of the septic conditions now in  
10 Cabin Branch directly behind the House of Raeford. And you  
11 can see that effervescing. I mean this creek is basically  
12 just boiling. That's more than likely methane gas that's  
13 being released from the decomposition in the organic matter  
14 in the creek.

15          Q     And 15 LW32?

16          A     Same; September 17th is the septic conditions  
17 again in Cabin Branch, basically more of the same.

18                Ms. LeVeaux:           Your Honor, this is the last  
19 exhibit of 15. And there is a walk and there's just a few  
20 more other documents I want to ask her about. This might be  
21 a good juncture to break unless you want me to continue to go  
22 forward, and I don't mind doing that, whichever you would  
23 prefer.

24                The Court:                I need to finish up a little  
25 early; is that right? What day did--I know you had another

1 obligation.

2                   Mr. Jones:                I have to run out to Holly  
3 Springs to run a rabid homeowners association meeting.

4                   The Court:                It is today; is that---

5                   Mr. Jones:                (interposing) Right.

6                   The Court:                Okay. Well, at this point why  
7 don't we adjourn for the day and resume tomorrow back--was  
8 9:30--did that work? That will actually let me get some  
9 things in. Does that work for you as well?

10                  The Reporter:             Sure.

11                  The Court:                Okay. We'll be in recess today  
12 until tomorrow at 9:30.

13                               (The hearing was adjourned at 4:44 p.m. to  
14 reconvene at 9:30 a.m. on Thursday, December 1,  
15 2011.)

STATE OF NORTH CAROLINA

COUNTY OF WAKE

C E R T I F I C A T E

I, Kay K. Rohde, do hereby certify that the foregoing pages 577 through 746 represent a true and accurate transcript of the proceedings held at the Office of Administrative Hearings on Wednesday, November 30, 2011.

I do further certify that the witnesses on this day of the proceedings in the above action were duly sworn or affirmed by me in my capacity as a notary public in and for the County of Wake, State of North Carolina.

I do further certify that I am not counsel for or employed by any party to this action, nor am I interested in the results of this action.

In witness whereof, I have hereunto set my hand this 10th day of January, 2012.

---

Kay K. Rohde, CVR-CM  
Notary No. 19971050205