# Exhibit 20

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
SOUTHERN DIVISION
No. 7:23-CV-00897

---

IN RE:
CAMP LEJEUNE WATER LITIGATION

This Document Relates to:
ALL CASES

---

VOLUME II

VIDEO-RECORDED EXPERT DEPOSITION OF
REMY J.-C. HENNET, PhD

Wednesday, June 4, 2025
9:19 AM Eastern Time

Reported by: Denise Dobner Vickery, CRR, RMR
Job No. MDLG7371943

Wednesday, June 4, 2025

9:19 AM Eastern Time

Video-Recorded Expert Deposition of REMY J.-C. HENNET, PhD, Volume II, held at the offices of:

MOTLEY RICE LLC
401 9th Street NW
Suite 1001
Washington, DC 20004

Pursuant to notice, before Denise Dobner Vickery, Certified Realtime Reporter, Registered Merit Reporter, and Notary Public in and for the District of Columbia.

APPEARANCES:

Representing the Plaintiffs:

WEITZ & LUXENBERG
BY: LAURA J. BAUGHMAN, ESQ.
BY: DEVIN BOLTON, ESQ. (VIA ZOOM)
700 Broadway
New York, NY 10003
212.558.5915
lbaughman@weitzlux.com
dbolton@weitzlux.com

Representing the Plaintiffs:

MOTLEY RICE LLC
BY: MARGARET SCALISE JOHNSON, ESQ.
(VIA ZOOM)
28 Bridgeside Boulevard
Mt. Pleasant, SC 29464
843.216.9239
mscalise@motleyrice.com

APPEARANCES: (Continued)

Representing the Plaintiffs:

KELLER POSTMAN LLC
BY: ZINA BASH, ESQ. (VIA ZOOM)
111 Congress Avenue, Suite 500
Austin, TX 78701
512.690.0990
zina.bash@kellerpostman.com

Representing the United States of America:

U.S. DEPARTMENT OF JUSTICE
BY: ALLISON O'LEARY, ESQ.
BY: ALANNA HORAN, ESQ.
1100 L Street NW
Washington, DC 20005
202.552.9843
allison.o'leary@usdoj.gov
allana.horan@usdoj.gov

APPEARANCES: (Continued)

ALSO PRESENT:

Deshawn White - Videographer
(ZOOM) Deanna Havai, Paralegal - Motley Rice
(ZOOM) Haroon Anwar, Esq. - DOJ
(ZOOM) Giovanni Antonucci, Esq. - DOJ
(ZOOM) Joseph Sclesky, Intern - DOJ
(ZOOM) Mike Dowling, Esq. - The Dowling Firm
(ZOOM) Dennis Reich, Esq. - Reich and Binstock
(ZOOM) Tim Thompson
(ZOOM) William Williams

INDEX

DEPOSITION EXHIBITS

(Attached to transcript.)

REFERENCED EXHIBITS

(Attached to transcript.)

P R O C E E D I N G S

- - -

THE VIDEOGRAPHER: We are now on the record.

My name is Deshawn White. I'm a videographer for Golkow, a Veritext division. Today's date is June 4, 2025 and the time is 9:19 AM.

This video is being held at 401 9th Street, Northwest, Washington, DC in the matter of Camp Lejeune Water Litigation versus United States of America for the United States District Court for the Eastern District of -- is it North Carolina?

MS. BAUGHMAN: Yes.

THE VIDEOGRAPHER: Thank you.

The deponent is Remy Jean-Claude Hennet.

The court reporter is Denise Vickery.

Will counsel please identify themselves, followed by the court reporter administering the oath.

MS. BAUGHMAN: Laura Baughman for the plaintiffs.

MS. O'LEARY: Allison O'Leary for the Department of Justice.

MS. HORAN: Alanna Horan here on behalf of the United States.

- - -

REMY J.-C. HENNET, PhD

recalled for examination, and, after having been duly sworn, was examined and testified further as follows:

- - -

FURTHER EXAMINATION

- - -

BY MS. BAUGHMAN:

Q. Can you please state your name for the record?

A. My name is Remy Jean-Claude Hennet.

Q. Dr. Hennet, my name is Laura Baughman. I'm an attorney, and I represent the plaintiffs in the Camp Lejeune litigation.

You understand that?

A. Yes, I do.

Q. Okay. And you understand that

you're here today testifying under oath just as if you're in court in front of the judges?

A. Yes, I do.

Q. Okay. If you don't understand any question I ask you, will you please let me know?

A. I will.

Q. Otherwise, if you answer a question, I'm going to assume that you understood it.

Is that fair?

A. I suppose, yes.

Q. Okay. Is there any reason you cannot testify truthfully here today? Like are you on any medications or having any -- any health or other issues?

A. No.

Q. Okay. Great.

I want to start with your history in working on Camp Lejeune-related matters.

So is it correct that you first started working on anything related to Camp Lejeune in 2005?

A. Approximately, yes.

MS. BAUGHMAN: Okay. And just for context, I'm going to mark an e-mail

that was sent to us by one of the attorneys at the Department of Justice. I just have a quick question about that. Okay?

(Document marked for identification as Exhibit 30.)

BY MS. BAUGHMAN:

Q. So this is an e-mail from Joshua Carpentito -- I may -- Carpenito, I guess, from May 1, 2025 sent to me and other counsel representing the plaintiffs, and he indicated that:

"The United States has confirmed through internal documentation that Dr. Remy Hennet was retained by the Department of Justice as of February 25, 2005 in Gros -- that's G-r-o-s -- versus United States" and it goes on from there, and that was "an action under the Federal Tort Claims Act claiming personal injury as a result of exposure to contaminated water at Camp Lejeune."

MS. O'LEARY: And I'm sorry to interrupt. What is the exhibit number for this? It might be marked on there,

but I didn't hear it.

MS. BAUGHMAN: It's Exhibit 30.

MS. O'LEARY: 30. Thank you.

MS. BAUGHMAN: Okay.

BY MS. BAUGHMAN:

Q. So, Dr. Hennet, does that -- is that correct? Is that consistent with your recollection that you were retained on February 25, 2005 in the Gros case?

MS. O'LEARY: Object to foundation.

THE WITNESS: I don't recall the details of it, but I was retained by the DOJ in 2005. That's what I recall.

BY MS. BAUGHMAN:

Q. To work on personal injury -- a personal injury case related to Camp Lejeune?

A. Yes. I was retained as -- as an expert --

Q. Yes.

A. -- as to basically do some work on the contamination in the water supply.

Q. Okay. Do you know how many

different litigation cases you've been retained on by the Department of Justice related to Camp Lejeune?

A. Yes, there were more than one, but I don't know exactly.

Q. Okay. Other -- before we started the deposition, I handed you a copy of the deposition that was taken of you on March 20, 2005 (sic) in the Camp Lejeune Water Litigation, the same litigation we're here today for.

You understand that?

A. I do.

Q. Okay. Other than the March 20, 2005 (sic) deposition, have you ever testified under oath regarding Camp Lejeune before?

MS. O'LEARY: Object to foundation.

THE WITNESS: I do not recall. I would have to look at my CV for that because all the cases that were either deposition or trial testimony are listed in my CV. All of them in my -- in my full CV.

BY MS. BAUGHMAN:

Q. Not in the CV that was produced here today; correct?

A. I don't know.

MS. BAUGHMAN: Well, let's look at that then.

I'm marking as Exhibit 31 your December 9, 2004 report that you produced in this case.

(Document marked for identification as Exhibit 31.)

BY MS. BAUGHMAN:

Q. And there is an exhibit to your report that has your CV, and take a look at that and let me know if you've ever testified before regarding Camp Lejeune other than on March 20, 2025.

A. I have to find it in this document.

Q. Yeah.

A. (Reviews document.)

Q. It's Attachment A. There you go.

A. I just found it. Okay.

Q. So fifth page of the Attachment A provides deposition experience, but it's only 2020 to present, and my question is not limited to

that.

I'm asking: Have you ever testified regarding Camp Lejeune?

A. Again, you know, my full CV, I guess, is accessible on the webpage of my company, and here for this report I was -- I was asked or directed to basically provide information as far as my testimonies were concerned for the last four or five years. That's what I -- that's what I recall.

Q. Okay. So based on your memory, you're saying you don't know whether you've ever testified under oath before March 20, 2025 regarding Camp Lejeune; is that correct? You don't remember?

A. Well, I know I did some reports. I did some declarations and I, you know, it has been 20 years span that we are talking about. And my memory, I do not have an answer for you that will be detailed, no.

Q. But if I go online on your company's website, that lists -- that provides the full list of your prior testimony and that will give me the answer.

Is that what you're saying?

A. That's what I am saying.

Q. Okay. Thank you.

Has all of your work related to Camp Lejeune been on behalf of the Department of Justice?

A. Yes.

Q. And has all of your work related to Camp Lejeune been related to litigation matters?

A. I believe so, but I am -- it could have been that I may have been asked to do some consulting at some point. I -- but, by and large, it was always related to some type of litigation.

Q. Wait. Who asked you to do non-litigation consulting related to Camp Lejeune?

MS. O'LEARY: Object to foundation.

THE WITNESS: I don't know if I ever did that and I don't know. I wouldn't know who ask me to do anything like this. But we're talking about 20 years and, you know, I am a consultant. So sometimes I am asked questions about being retained as an expert.

BY MS. BAUGHMAN:

Q. Okay. As your -- based on your best recollection today, can you identify any non-litigation work you've ever done related to Camp Lejeune?

A. Right here I cannot identify any --

Q. Okay.

A. -- at this today.

MS. BAUGHMAN: I'm going to hand you what I've marked as Exhibit 32 to your deposition.

(Document marked for identification as Exhibit 32.)

BY MS. BAUGHMAN:

Q. Here you go.

A. Thank you.

Q. And Exhibit 32 is Bates-stamped CLJA_UST02-0000522322 through 323. It's an e-mail chain.

I'm going to direct your attention to the e-mail in the first page at the bottom half of the page from you to Adam Bain, subject "Building 902."

Do you see that?

A. Yes, I do.
Q. Okay. And this e-mail you're writing to Mr. Bain and you're recommending -- you see in that second paragraph -- "that 4 boreholes be constructed to establish the groundwater flow direction in the area of building 902."
Do you see that?
MS. O'LEARY: Object to form and foundation.
THE WITNESS: I see that.
BY MS. BAUGHMAN:
Q. Okay. And in the fourth paragraph of that e-mail you say:
"In the new borings, groundwater samples should be collected at the water table and deeper at 20-feet depth increments and analyzed for TCE and PCE."
Do you say that? You see that?
A. I see that.
Q. And then in the next paragraph you say:
"Soil samples should be collected in one borehole at depths of about 20, 40, and 80 feet and analyzed for their fraction organic

carbon."

You see that?

A. I see that.

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. Okay. Why were you making these recommendations regarding boreholes, groundwater samples, and soil samples in September of 2006?

A. Well, I -- my recollection is at the time I was trying to understand where the contamination was coming from to some water supply ways that were contaminated. That's -- that's a reason why I was doing this. That was part of the first phase of things that I did after having been retained by the DOJ.

Q. So this -- so this was -- the request for the drilling of the boreholes and the groundwater samples and the soil samples was done in connection with litigation that the DOJ hired you to work on; is that correct?

A. Well, my recollection is, is that I was just trying to understand the sources.

Q. For what purpose?

A. For the purpose of why was it contamination in the water supply.

Q. But why?

A. In certain -- in certain specific wells, and if I recall for this, that was I think the wells were 60 -- 600 series of wells that are along there.

Q. In the Hadnot Point area?

A. In the Hadnot Point area.

Q. Okay. But I guess you were hired to do this work by someone; right? I mean, you weren't doing it for your own edification?

A. I think that was part of what I was hired for in -- in -- for the Camp Lejeune issue. I think at the beginning, there was some unknown as far as certain wells had contamination, and in order to understand that, I wanted to understand where it come from.

Q. So --

A. Where it came from. Sorry.

Q. Right.

So you're e-mailing Mr. Bain.

You're clearly doing this work for the Department of Justice; correct?

A. Yeah, yeah, yeah. Yes.
Q. Okay. For the litigation?
A. That's my understanding, yeah.
Q. Well, for example, did you do any work to help remediate the Camp Lejeune site?
A. No, I did not do remediation work.
Q. Okay.
A. But the information that I recommended be acquired, I suppose, was relevant to what I did, but it might have been relevant to what other people did who might have been basically involved in the remediation work.
Q. But that wasn't your purpose in doing this?
A. No.

MS. BAUGHMAN: Okay. So I'm handing you what's marked as Exhibit 33 to your deposition.

(Document marked for identification as Exhibit 33.)

BY MS. BAUGHMAN:

Q. And Exhibit 33 is Bates-stamped CLJA_UST02-0000523534, and this is just a one-paragraph e-mail from Scott Williams to Robert

Lowder on June 8, 2007, and it says "Bob" -- this is from Scott.

"Bob, I just spoke with Remy Hennet. He formed me that he has the data he needs."

And if you go down toward the bottom of the e-mail, the second to last line it says:

"As far as Remy is concerned it is the CERCLA teams call. He has what he needs."

Do you know what -- what you needed at that time? Do you remember this?

A. Vaguely, but if I recollect what I needed was understanding the direction of groundwater flow around well 600 series, and -- and I also wanted to have basically measurements of the fraction organic carbon in the groundwater environment. And that's what I recall that's what I needed.

Q. Okay. Do you remember, did you ever request any other testing be done at Camp Lejeune other than the e-mails I've just shown you?

A. No. The exception would be recently I had -- before my expert report, I had asked via counsel for the -- the water treatment personnel to measure something in there related to a

spiractor --

Q. Okay.

A. -- effluent pipe.

Q. Yes. We're definitely going to talk about that.

So other than the requests that are documented in Exhibits 32 and 33 that we just talked about and your request for a measurement of the spiractor pipe at the water treatment plant, have you ever requested any other testing be done at Camp Lejeune?

A. I don't recollect any.

Q. Okay. So in your last deposition, you testified that you had been to Camp Lejeune three times.

Is that consistent -- no, that's not right.

Three times in this case; is that correct?

A. That's what I recall, yes.

Q. Okay. Do you know how many other times you've been to Camp Lejeune other than for the purpose of this case?

A. I do not recall exactly, but there

were instances where I went to do site visit at Camp Lejeune, yes, and probably early on as that's what I recall.

Q. Okay. Each time you went, that would have been for purposes of litigation matters for the DOJ; right?

A. Yes.

MS. BAUGHMAN: Okay. Okay. I'm handing you what we've marked as Exhibit 34 to your deposition.

(Document marked for identification as Exhibit 34.)

MS. BAUGHMAN: And this is the Supplemental and Corrected Reliance List that was provided to us by DOJ in February of 2025.

Let me also -- I already -- what's the exhibit number for the report? Can you remind me? Is that 30?

THE WITNESS: For the report? Excuse me.

MS. O'LEARY: 31.

THE WITNESS: 31, right.

MS. BAUGHMAN: Thank you.

BY MS. BAUGHMAN:

Q. All right. Does the Supplemental and Corrected Reliance List list all of the documents that you reviewed and you're relying on for your opinions in this case?

A. Well, I have access to the full set of documents via, you know, a portal, I guess, but those are the ones that, I suppose.

Q. Okay. What do you mean by the full set of documents in the portal? What are you referring to there?

A. Well, I am referring to, I guess, those -- those documents which the ones cited in my report, and I had access to the -- to all the documents and that's what I recall. Specific documents, I don't by memory remember exactly what those documents would have been without seeing them, you know.

Q. All right. So you understand that the federal rules require you to provide a list with your report of the documents that you've reviewed and that you're relying on for your opinions in this case, and counsel has provided us with this Supplemental and Corrected Reliance

List.

And I'm trying to figure out if there are any other documents that you plan to rely upon for your opinions in this case that are not listed on Exhibit 34.

Are you aware of any?

A. I am not aware of any that would be specific to -- to Camp Lejeune. You know, I have books that I use, and if a question comes, I may just, you know, that's basically based on all my knowledge, experience, education.

Q. Okay. As you sit here today, can you identify any document, book, anything that you are relying on for your opinions in this case --

A. No.

Q. -- that's not listed in Exhibit 34?

A. Not to my knowledge.

Q. Okay. So you've provided two errata sheets, like corrections, to your report as part of this litigation. Most of it was like corrections to citations to documents.

Other than what was contained on those errata sheets, have you identified any other changes that you wish to make to your expert

report, Exhibit 31?

A. No, I have not. It may be some spelling mistakes or "I" for "they," you know, because of my French accent sometimes when I say "they."

Q. Okay. Let's talk about substantive, substantive changes, not -- not grammatical or spelling issues.

Can you identify any substantive change that you would like to make to your report, Exhibit 31?

A. I have no substantive changes to be made.

Q. Okay.

A. With the exception of, you can have some confusion between an "I" and a "they" as far as the meaning of the sentence. Right?

Q. Okay. I want to go back to ask you a few questions about your CV.

So that again Exhibit --

A. 31.

Q. -- 31 is your report and your CV is attached as Attachment A.

And, actually, I was going to ask

you if exhibit -- the CV that's attached as Attachment A to your report is a true and correct copy of your current CV, but it's not; right?

Your current CV is actually what's on your website; is that fair?

A. Well, this is with the last four years of testimony or trial appearances; whereas, my CVs that you can find on our website may have something, everything I ever done as a professional for deposition or trial appearances and, you know, it doesn't stop at 2020 in that case.

Q. Okay. With the exception of the list of your prior testimony, is this the CV attached as Attachment A to your report a true and correct copy of your current CV?

A. I believe so.

Q. Okay. On the first page in the first paragraph at the top, there is a sentence that says:

"Dr. Hennet is often retained as an expert witness for litigation in providing services to industry, law firms, and the U.S. Department of Justice."

Do you see that?

A. I do.

Q. Okay. And that's true; right?

A. That is true.

Q. Can you tell me, like, over the past year, let's say, what percentage of time you worked on litigation matters as opposed to other work?

A. Well, roughly, over the past year especially I have done more litigation-related work than I did over my career. Right?

Q. Okay. So I'm going to break it down in different time frames. I'll first just ask for the last year and then we'll go backwards. Okay?

So over the last year, can you estimate is your work 50 percent litigation or -- or more or less? What can you tell me?

A. Well, 50 percent is a good guess.

Q. Okay.

A. Right.

Q. And then let's say last five years.

Over the last five years, what percentage of your time would be litigation related?

A. It would be a little bit less than presently.

Q. So maybe 40 percent? 30 percent?

A. That's a good guess as well.

Q. Okay. Have you ever been retained by a plaintiff or a group of plaintiffs who were injured or claimed they had been injured from exposure to toxic substances to be an expert in that kind of a case?

A. That could have been. You know, I have done work for all kind of -- all kind of parties, if you wish, that included, you know, Sierra Club. For example, I have worked for the Sierra Club. River Keepers I guess I did some work for this type of group. I have done industry work.

And as far as having a role as an expert within potential on the plaintiff side, I think there was some. One case come up to mind for me is St. Croix in the U.S. Virgin Islands. I did some work there for evaluating contamination at the refinery, former refinery.

Q. So I read something about that.

In that case, you were hired by the

government, right, of St. Croix?

A. A law firm and I think the law firm was actually representing the government of St. Croix.

Q. Right.

A. That's -- that's what I recall.

Q. So -- so can you recall ever working on a case where you were retained by lawyers who were representing people who claimed they had been injured because they were exposed to contaminants in the environment?

A. Yeah, I understand your question and I, you know, I have been retained maybe in several dozen cases that and probably -- and the cases I'm talking about went to either deposition or trial appearances. But there are also many other cases where I was retained that never went to deposition or, you know, they settled, those things, like those things.

And my goal of this, specifically right now, I cannot give you one specifically right now, but I believe there might have been some.

Q. But you can't identify -- just let

me finish the question.

As you sit here today, you can't identify a case where a lawyer representing someone injured from exposure to a toxic substance hired you as an expert; is that fair?

A. Right now I cannot --

Q. Okay.

A. -- give you a case.

Q. Okay. Would it also be fair to say that the majority of your litigation work has been either on behalf of industry or the government?

A. Well, as far as a number of cases are concerned, I have worked for plaintiffs and defendants. I have worked for the government, but I have also worked for utilities. I have, you know, and I have worked for organizations, as I mentioned before.

And if you -- if you were to count the number of cases for plaintiffs, number of cases for non-plaintiffs, I mean, maybe a third for plaintiffs and the rest for non-plaintiffs.

Q. Right.

A. But some -- some of the plaintiffs work may be a bit shorter sometimes.

Q. But some of the plaintiffs you worked for were industry; right? Sometimes it's one company suing another company?

A. No, no, no. You have some of that, but you have some which are basically associations, for example, having issues with sewer systems or -- or, you know, I did work for the Hudson River organization. So you have some of those and those are -- I would put them in the bucket of plaintiffs.

Q. Okay. But the majority of your work has been on behalf of industry or the government that's litigation related; right? More than half?

A. If you -- if you sum government plus industry, it may be little bit more than half.

Q. Okay. I'm going to ask you about your areas of expertise.

On your CV on the right-hand side like the blue portion, it gives example areas of expertise.

Do you see that?

A. Example? Yes, I see that.

Q. Okay. And in addition, like in that first paragraph, you wrote:

"His areas of expertise include" and it says "the analysis of geochemical fingerprints for organic and inorganic compounds including radionuclides and stable isotopes, the evaluation of the timing of chemical releases, the allocation of responsibilities for cost allocation, and geochemical modeling."

Do you see that?

A. You're talking about the first paragraph of the CV?

Q. Yes.

A. Yeah. Well, it sounds right.

Q. Okay. Do you consider yourself to be an expert in groundwater modeling?

A. Well, I am educated in groundwater modeling. I'm -- I have a university degree and I hold geologies that included that, but my company is really a leader in that and we have people in the company that are, you know, that I rely upon for -- for modeling specifically.

Q. Sure. I understand that. So I'm not questioning anything about your company or anyone else. I'm just talking about you.

Do you -- do you yourself to be an

expert in groundwater modeling?

A. I am educated in groundwater modeling and you have to define what an expert is.

Q. Okay. So your education in groundwater modeling was from your diploma from Switzerland; is that right?

A. That's correct.

Q. In 1980?

A. That's correct.

Q. Okay. Have you --

A. I would add, plus the exposures that I have had through the years being working in a firm that does a lot of groundwater modeling.

Q. Okay. Have you published any articles in the peer-reviewed literature regarding groundwater modeling, either flow or fate and transport or any other kind of groundwater modeling?

MS. O'LEARY: Object to form.

THE WITNESS: Combined with geochemical modeling, I have actually, you know, done some movement of certain contaminant in the subsurface.

You need both. You need what

makes it move is actually the groundwater movement, and the geochemical aspect of it is -- is -- was part of that.

And I believe -- I believe I have -- I co-authored a paper on some -- on one case, maybe four. That was arsenic, as I recall.

BY MS. BAUGHMAN:

Q. Okay. So you've got your CV in front of you --

A. Yes.

Q. -- which has a publication list.

Can you identify which peer-reviewed publications you have that you're an author of that are concerned with groundwater modeling?

A. Yes, that is. By that you mean that is an aspect of groundwater modeling included in it and -- and that's important.

I -- the papers that I published were the second one on the list, Bessinger and Hennet 2019. So that's the one I was that came to mind when you asked me that question. And in that one, you had movement of arsenic and its reaction, its fate and transport, when water recharges to an

aquifer and so that's -- that one combined some groundwater flow.

Q. Any others? I just need the list for now. Any others?

A. Yeah.

MS. O'LEARY: Object to form.

THE WITNESS: Be patient. It's a long list. So.

(Reviews document.)

I believe the 2007 paper with Soderberg in it. Soderberg is S-o-d-e-r-b-e-r-g. Also involved some combination of geochemistry and groundwater movement.

BY MS. BAUGHMAN:

Q. Okay. You know what? Let's -- let me withdraw that question and I'm going ask you a different question.

Let me ask you this.

Have you yourself ever -- ever developed a groundwater flow model?

A. Yes, I have, as part of my education.

Q. Okay. When you were in school?

A. When I was at the university, yes.
Q. Okay.
A. That was part of what we will do.
Q. Okay. After you graduated in 1980 from -- with that diploma from Switzerland, have you developed a groundwater model since then?
MS. O'LEARY: Object to form.
THE WITNESS: Simple, simple model, if you want to call it a model, calculations of groundwater movement and so on. I have done that.
BY MS. BAUGHMAN:
Q. Okay. I'm not talking about calculations. I'm talking about an actual model.
MS. O'LEARY: Object to form.
THE WITNESS: Well, define a model. A model is a set of calculations.
BY MS. BAUGHMAN:
Q. Okay. You're familiar with the type of model that we're talking about here in this case that the ATSDR developed; correct?
MS. O'LEARY: Object to form.
THE WITNESS: Yes, I have -- I have looked at it, yes.

BY MS. BAUGHMAN:

Q. Okay. Have you ever run that model?

A. Personally I have not. That was done by my colleague.

Q. Okay. Have you ever -- so the ATSDR developed multiple groundwater models that are at issue in this litigation; fair? It's more than one; right?

A. It's two.

Q. Okay. Have you developed a different groundwater model related to Camp Lejeune?

MS. O'LEARY: Object to form.

THE WITNESS: Again, it's definition of a model. If a model is a calculation, I have done calculation.

BY MS. BAUGHMAN:

Q. Okay. And those are the calculations discussed in your report?

A. Yes.

Q. Okay. Did you assess the model bias for your groundwater flow model that you've done for Camp Lejeune?

A. Can you explain what you mean by

"bias"?

Q. Well, let me ask you this.

What sensitivity or uncertainty analysis did you do for your groundwater model for Camp Lejeune?

A. I --

MS. O'LEARY: Object to form.

BY MS. BAUGHMAN:

Q. If any.

A. What I -- what I did did not require that because it is included in -- in it because -- because of the lack of data and so on and, you know.

Q. Okay. So did you do a sensitivity analysis for what you're calling your model for Camp Lejeune?

MS. O'LEARY: Object to form.

THE WITNESS: I didn't do a sensitivity analysis.

BY MS. BAUGHMAN:

Q. Okay. Did you do an uncertainty analysis for what you're calling your model for Camp Lejeune?

MS. O'LEARY: Object to form.

THE WITNESS: I didn't do specifically an uncertainty analysis.

I am just aware that you have a very large amount of uncertainty for whoever makes calculations when you have no data.

BY MS. BAUGHMAN:

Q. Your -- your testimony is there's no data, literally none, zero data related to Camp Lejeune.

Is that what you're saying?

A. Well, you have very limited data as far as -- as contamination is concerned and then you have site-specific data and you have basically, you know, hydrological framework that is simplified, and all of that has a lot amount of uncertainty.

Q. Have you ever made a presentation at a conference regarding groundwater flow or fate and transport modeling?

MS. O'LEARY: Object to form.

THE WITNESS: I believe so.

BY MS. BAUGHMAN:

Q. Okay. Have you ever received an

honor or award from your work on groundwater modeling?

MS. O'LEARY: Object to form.

THE WITNESS: Not on groundwater modeling, no.

BY MS. BAUGHMAN:

Q. Have you ever published anything related to Camp Lejeune?

A. No.

Q. Have you ever made a presentation, a public presentation at a conference, for example, related to Camp Lejeune?

A. No.

Q. Okay. Are you an epidemiologist?

A. I am not an epidemiologist.

Q. Are you a toxicologist?

A. I am not a toxicologist.

Q. Have you reviewed any of the epidemiology studies published by the ATSDR regarding Camp Lejeune?

A. I recall having seen some of that.

Q. So I reviewed your Exhibit 34, your Supplemental and Corrected Reliance List, and I did not see any of the published peer-reviewed

epidemiology studies that Dr. Bove and others have published regarding Camp Lejeune listed on your reliance list.

Did you review those epidemiology studies as part of your work on this case?

MS. O'LEARY: Object to foundation and form.

THE WITNESS: Not on this case. I am not relying on that on this case.

BY MS. BAUGHMAN:

Q. Okay. Have you yourself ever conducted an exposure assessment for an individual person, in other words, to determine how much of a chemical the person was exposed to by inhalation, ingestion, and/or dermal contact?

A. No. I have -- I have worked on issues that relate to geochemistry and hydrogeology that deal with concentrations and -- but I don't go to the exposure. I don't go to the inhalation. I don't go to those kinds of things.

Q. Okay. Is that because calculating the exposure for individual person is not part of the -- your expertise?

MS. O'LEARY: Object to form.

THE WITNESS: It's not what I do.

BY MS. BAUGHMAN:

Q. Okay. What about -- I think I know the answer.

But for this case, the Camp Lejeune litigation, have you calculated the exposure of any individual person to the contaminants at Camp Lejeune?

A. I have not done such calculations that will be specific like that.

Q. So can you identify, as you sit here today, any individuals or any group of individuals that you would say were substantially exposed to contaminated water at Camp Lejeune?

MS. O'LEARY: Object to form.

THE WITNESS: What I have done is, I have reviewed the information and the data, and I have made my conclusions that are in my report for this case.

And, you know, there is another case I worked on which is

different from this one where I looked at concentration potential in the water supply, in the waters that was basically supplied to the person for small period of time. That's the Washington case if I recall.

BY MS. BAUGHMAN:

Q. The Baby Washington case; right?

A. Yeah, so I have done that, but for this case for this report, I have not done. I have just looked at the geochemistry and the hydrogeology and the geology.

Q. Okay. So you're not going to offer an opinion to any of the judges in this case about any individual person or any group of people as to whether they were or were not substantially exposed to contaminated water at Camp Lejeune; is that fair?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Yeah, I am not providing opinions that are not in my report.

BY MS. BAUGHMAN:

Q. Okay. And that's not in your report, is it?
A. It is -- it is not in my.
Q. Okay.
A. Because the opinions in my report speak for themselves.
Q. Okay. And you have not offered an opinion in your report about whether any individual person or any group of people was substantially exposed to contaminants at Camp Lejeune; fair?
MS. O'LEARY: Object to form.
THE WITNESS: I have not done that for people, no.
BY MS. BAUGHMAN:
Q. Okay. Have you ever developed or used a water model to determine contaminant concentrations that would be used for an individual exposure determination?
MS. O'LEARY: Object to foundation.
THE WITNESS: Not that I can recall here.
BY MS. BAUGHMAN:

Q. Okay.
A. With the exception of -- well, there is no exception.
Q. Okay.
A. I cannot recall.
Q. I'm going to ask you a few questions about the experts for the plaintiffs in this case. Okay? I'll -- I'll ask one by one.
Let me ask you about Dr. Leonard Konikow or Lenny Konikow.
Do you know him?
A. I know him socially.
Q. Okay. Have you ever worked with Dr. Konikow?
A. No.
Q. Okay. Are you aware of his reputation in the hydrogeology or groundwater field?
A. Yes. He's a reputable hydrogeologist that worked for the USGS.
Q. Reputable; is that what you said?
A. Yeah.
Q. Okay. What about Morris Maslia? Do you know him personally?

A. I do not.
Q. Okay. You've never worked with Morris then, I assume?
A. With who?
Q. Mr. Maslia?
A. No, I have not.
Q. Okay. Norm Jones and Jeff Davis, the two individuals who did the post-audit.
Do you know them?
A. I do not.
Q. Are you aware of their reputation in the hydrogeology or groundwater modeling community?
A. I do not.
Q. Okay. Dr. David Sabatini. Do you know him?
A. Except for this case, I have never met him or I don't know him.
Q. Okay. And are you aware of his professional reputation?
A. No.
Q. Okay. Have you ever communicated with Dr. Clement regarding Camp Lejeune?
A. Dr. What?

Q. Clement. The individual who wrote part of the NRC report and published an article. He's discussed, I believe, in your report.

A. No.

Q. He's certainly discussed in Dr. Spiliotopoulos's report.

A. Yeah, I --

MS. O'LEARY: Object to form.

THE WITNESS: I do not know him.

BY MS. BAUGHMAN:

Q. You don't know Dr. Clement?

A. I don't.

Q. Okay. So, obviously, you have not communicated with him about Camp Lejeune then?

A. I don't believe so.

MS. BAUGHMAN: Okay. Let me see here.

(Document marked for identification as Exhibit 35.)

(Document marked for identification as Exhibit 36.)

(Document marked for identification as Exhibit 37.)

BY MS. BAUGHMAN:

Q. Okay. I am going to hand you in a moment. I need to read this out first.

I'm going to hand you what I've marked as Exhibits 35, 36, and 37 to your CV, and those are a series of documents with the first part of the Bates stamp series saying CLJA_SSPA_INVOICES, and then there are numbers. 35 goes 1 through 41, 36 goes 43 through 287, and then 37 goes 288 through 407. Okay?

And I believe these are all of the invoices that have been produced to us regarding SSPA's -- that's S.S. Papadopulos & Associates -- work related to Camp Lejeune?

A. Thank you.

Q. And can you confirm that for me?

A. What is your question?

Q. Okay. Are Exhibits 35, 36, and 37 SSPA's invoices regarding work related to Camp Lejeune?

MS. O'LEARY: Object to foundation.

THE WITNESS:

(Reviews document.)

MS. O'LEARY: Also object to form.

THE WITNESS:

(Reviews document.)

MS. O'LEARY: Dr. Hennet, are you waiting for a question or?

MS. BAUGHMAN: I asked you a question.

Could you repeat it, please?

(The reporter read the record on page 343 lines 18-20.)

THE WITNESS: They appear to be. I am not the one who make this kind of invoices. I am not making invoices. I am not doing the administrative work at SSPA.

BY MS. BAUGHMAN:

Q. Okay. But you've just spent a few minutes flipping through Exhibits 35, 36, and 37, and those appear to be invoices from your company, SSPA; correct?

A. It appears to be.

Q. And they are related to Camp Lejeune; correct?

A. Well, I believe so.
Q. Okay. And they document work from 2005 all the way until February of 2025 related to Camp Lejeune; correct?
MS. O'LEARY: Object to foundation.
THE WITNESS: 2005?
BY MS. BAUGHMAN:
Q. Yes.
A. I -- I'm sorry. I didn't spot any 2005 invoices.
Q. Let's see. Let's look.
If you look at Exhibit 36.
A. Yes.
Q. Hold on a minute.
No, I'm sorry, Exhibit 37. And turn to the one that's stamped page 340.
A. Yeah.
Q. So at page 340, let me ask you about this.
This is a page -- from 340 until 345 is a timesheet backup report for billing to the DOJ of SSPA from January 23, 2005 until October 27, 2007.

Do you see that?

A. I see that.

Q. Okay. And then if you turn to page 346, that invoice is for professional services rendered for the period January 23, 2005 until March 19, 2005.

Do you see that?

A. I see that.

Q. And based on the testimony you've given today and in the prior deposition, you didn't work on Camp Lejeune-related matters for the DOJ before January 23, 2005; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: That's my understanding.

BY MS. BAUGHMAN:

Q. Okay. So and then -- and then in terms of the range of what we've got here, if you go to Exhibit 35 and you go to the end of that, page 42.

A. Wait. Hold on. Page?

Q. 41 actually.

A. Yes.

Q. So that invoice is for services rendered through January 31, 2025.

Do you see that?

A. Yes.

Q. Okay. I'm guessing you don't know the answer.

I've just established we have a range of invoices that start in January of 2005 and end in January 2025.

To the best of your knowledge, have all of the invoices for SSPA's work related to Camp Lejeune been produced to the plaintiffs in this case?

MS. O'LEARY: Object to form and foundation.

BY MS. BAUGHMAN:

Q. In that time frame.

MS. O'LEARY: Same objections.

THE WITNESS: I am not the one who produce those. So I don't know.

BY MS. BAUGHMAN:

Q. Okay.

A. But I suppose they're all there.

Q. I mean, you haven't purposefully

told anyone to not produce any of them, have you?

A. I have not. I have nothing to do with this.

Q. Okay. You're aware that there were motions filed and, as a result of that, that the DOJ attempted to produce all of the invoices, that SSPA had to go and look for these.

Are you aware of that?

MS. O'LEARY: Object to foundation.

THE WITNESS: Vaguely, yes. I was out of the country for, you know, two and a half weeks. I just came back this weekend, and I think that all happened during that period of time.

BY MS. BAUGHMAN:

Q. Okay.

A. And I, you know, so if -- if you requested all the invoices from my -- from my shop, from SSPA, I suppose that I will have done the best I could to provide that.

Q. And you certainly wouldn't have withhold them?

A. Pardon?

Q. You would not have withheld them?
MS. O'LEARY: Object to form.
THE WITNESS: No, I --
BY MS. BAUGHMAN:
Q. And, obviously, you flipped through these documents.
SSPA has a logo; right?
A. SSPA has a logo, yes.
Q. And so on page -- on Exhibit 35 at the top of the page, that's SSPA's logo; right?
A. Yes, it is.
Q. And it appears, at least we can tell on the first page of each Exhibit 35, 36, and 37, it's all the same logo; right?
A. Yeah, except that it's in color --
Q. Right.
A. -- on the first one and not in the other one.
Q. Got it.
So let me ask you something.
If you look at Exhibit 35 and you go to the last page, which is page 42.
A. Yes.
Q. Okay. The billed to date on that

invoice, which is invoice 27722, is 2 million 400 -- I'm sorry -- $2,004,131.67.

Do you see that?

A. I see 2 million 216.

Q. That's the budget.

A. Oh, that's the budget. Okay.

Q. If you go down to billed to date?

A. Okay. I'm sorry. I see that.

Q. Okay. So billed to date as of January 31, 2025 was just over $2 million; right?

A. That's what it appears to be.

Q. Okay. But that's just for -- that's just for the litigation that we're here for today.

That doesn't include the prior litigation matters; correct?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: That's my understanding.

BY MS. BAUGHMAN:

Q. Okay. Do you know what the total amount of money is that SSPA has billed DOJ for all of your Camp Lejeune-related work 2005 to present?

A. I do not know.
Q. Okay. But we could add up all of these invoices and come up with a number and that would be the number as far as you know; correct?
MS. O'LEARY: Object to foundation.
THE WITNESS: Specifically I do not know. I suppose.
BY MS. BAUGHMAN:
Q. Okay.
A. If you -- if you add those numbers, maybe you -- you get a number somehow.
Q. Is there any reason that you're aware of that if we added up all of the invoices from Exhibits 35, 36, and 37 and came up with a number, is there any reason you're aware that that would not be the correct number for the amount of money that SSPA has billed DOJ for Camp Lejeune-related work?
MS. O'LEARY: Object to foundation.
THE WITNESS: I suppose this speaks for itself. I have nothing to do with this -- this piece of work.

BY MS. BAUGHMAN:

Q. Can you identify any reason that that wouldn't work out as the appropriate methodology, can you?

MS. O'LEARY: Object to form.

THE WITNESS: I cannot see any why reason it couldn't be.

MS. BAUGHMAN: Okay.

MS. O'LEARY: And would now be a good time for a short bio break?

MS. BAUGHMAN: Yes.

THE WITNESS: Yeah. That's right. I was going to ask for that as well.

THE VIDEOGRAPHER: The time is 10:18. We are going off the record.

(A recess was taken.)

THE VIDEOGRAPHER: The time is 10:28 AM. We are now on the record.

BY MS. BAUGHMAN:

Q. Okay. All right. Dr. Hennet, I'm going to ask -- I want to ask you some questions about -- we're going to talk about the spiractor fall height issue, but let me give you some

exhibits so that we have some things to talk about.

I'm going to hand you first what I've marked as Exhibit 38 to your deposition.

(Document marked for identification as Exhibit 38.)

BY MS. BAUGHMAN:

Q. And it is the AH Environmental report from December 2004 CLJA water modeling 01-000071446 through 71512. There you go.

A. Thank you.

Q. I'm also going to hand you this one was marked at your deposition in March as Exhibit 11. So I'm not going to re-mark it. I'll just refer to that as Exhibit 11 but give you a copy. And those are your notes that you took from your February 2025 Camp Lejeune site visit; correct?

A. Yes.

Q. Okay. Now I'm going to hand you what I've marked as Exhibit 39 to your deposition.

(Document marked for identification as Exhibit 39.)

BY MS. BAUGHMAN:

Q. And these are HENNET_USA_ a whole

bunch of 0s and it's 1 through 96.

And can you tell me. Are those the photographs that were taken at your February 2025 site visit?

MS. O'LEARY: Object to foundation.

THE WITNESS:

(Reviews document.)

It look like -- it looks like it.

BY MS. BAUGHMAN:

Q. Okay. And now I'm going to hand you what I've marked as Exhibit 40 to your deposition.

(Document marked for identification as Exhibit 40.)

BY MS. BAUGHMAN:

Q. And this is CLJA PHOTOS SSPA 1 through 45.

And my question for you is: Is Exhibit 40 photographs that were taken of your visit in May 2024 to Camp Lejeune for this litigation?

MS. O'LEARY: Object to foundation.

MS. BAUGHMAN: Foundation meaning he doesn't know if these are photos? Is that what you're saying?

MS. O'LEARY: Yeah, I don't know that. I mean, this is the produced versions. I don't know what he's seen. I believe he testified that he wasn't the one who took photographs.

MS. BAUGHMAN: Okay. Well, let's -- let's do this. For Exhibit 40 if you turn to --

So I guess to establish a foundation for this, your -- your position is that we have to call the attorneys for DOJ who took the photos?

MS. O'LEARY: I think you might need to ask him more specific questions about what he saw.

THE WITNESS:

(Reviews document.)

BY MS. BAUGHMAN:

Q. Okay. Turn to page 17 of Exhibit 40.

Who's that a picture of?

A. I'll get there.
I am there.
It's a picture of myself and of Dr. Alexander Spiliotopoulos.
Q. Okay. And where are you?
A. I am -- on the picture, I am on the right.
Q. No.
Where are you in the photo?
A. Oh.
Q. Where are you standing?
MS. O'LEARY: Objection. Form.
BY MS. BAUGHMAN:
Q. Where was the photo taken at?
A. Right. That's near building 670 at -- at Camp Lejeune.
Q. Okay. And what's building 670? Do you remember?
A. Yeah. It's one of the water treatment plant.
Q. Which one?
A. I think it's -- it is the Holcomb Boulevard Water Treatment Plant.

Q. All right. And where were you? Do you remember when this photo was taken?

A. Exactly not, but I'm sure it's in the record somewhere.

Q. Okay. Is it one of the times that you visited Camp Lejeune as part of this case?

A. Yes.

Q. Okay. And then if you turn to page 45, the last page of Exhibit 40, is that also a picture of you and Dr. Spiliotopoulos?

A. Yes.

Q. At Camp Lejeune?

A. Yes.

Q. Okay. So is Exhibit 40 pictures of your visit -- one of your visits prior to 2025 at Camp Lejeune?

A. I believe so.

Q. Okay. So if we look at your report, Exhibit 31. Your calculations -- let's see. Let's look at page 5-6 of your report.

Are you at page 5-6?

A. Yes, I am.

Q. Okay. And that is Exhibit 2-4. "COC Volatilization Losses at Hadnot Point Water

Treatment Plant"; correct?

A. Yes.

Q. So this documents how you made your calculations regarding volatilization losses for Hadnot Point; correct?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, that is information that support that. Yes.

BY MS. BAUGHMAN:

Q. Right. From your report?

A. That's in my report.

Q. Okay. So if you look at the fall height in the middle of Exhibit 2-4, the fall height is listed as 0.675 meters; right?

A. Yes.

Q. Okay. And 0.675 meters is 24 inches; is that right?

A. About two feet, yeah.

Q. Two feet is 24 inches?

A. (Nods head).

Q. Yes?

A. Yes.

Q. Okay. And then -- so it's

clear -- it's true that when you -- for your calculations of volatilization at the spiractor at Hadnot Point, you assumed a fall height of 2 feet; correct?

A. That's what -- that's what I recall with, yes.

Q. Okay. And that's what's documented in your report?

A. Yes.

Q. Okay. And then if you turn to page 5-9 of your report, that's Exhibit 2-5. "COC Volatilization Losses at Tarawa Terrace Water Treatment Plant"; correct?

A. Yes.

Q. Okay. And you have a fall height and it's also listed as 0.675; correct?

A. Yes.

Q. So for your calculations of the fall height at Tarawa Terrace, you also assumed 2 feet or 22 inches is the fall height; correct?

A. Yes.

Q. Okay. So let's look at Exhibit 38, the AH Environmental report. And if you could turn to page -- it's 3-10 in the report. The

Bates stamp numbers last three digits or last five digits are 71475.

You see that?

A. Not yet.

Yes.

Q. Okay. So this is a diagram prepared by AH Environmental regarding the fall height of the spiractor; correct?

A. Yes.

Q. And you're aware that AH Environmental made calculations regarding volatilization loss at the spiractor; correct?

A. Yes.

Q. Using the same formula as you, but they used 1 foot or 12 inches for the fall height instead of 2 feet; correct?

MS. O'LEARY: Object to foundation.

THE WITNESS: It's kind of reverse. I used the same formula as they.

BY MS. BAUGHMAN:

Q. You used the same formula as AH?

A. Yes.

Q. But you used 2 feet and they used 1; right?

A. Yes.

Q. All right. Let me ask you.

Have you -- have you spoken to anyone from AH Environmental regarding the report, Exhibit 38, their December 2004 report?

A. I have not.

Q. Okay. And just more broadly, have you spoken to anyone from AH Environmental regarding the spiractors and the fall height issue?

A. No, I have not.

Q. Okay. Do you know Dr. Peter Pommerenk?

A. I do not know him.

Q. Have you ever spoken to Dr. Pommerenk about anything related to Camp Lejeune?

A. I don't believe so.

Q. Okay. What about anyone who worked for SSPA? To your knowledge, has anyone reached out to Dr. Pommerenk or AH regarding any of the subject matter in Exhibit 38, the AH Environmental

2004 report?

A. Not to my knowledge.

Q. Okay. I want to ask you.

The first page of Exhibit 38 says that this report was prepared for the Environmental Management Division at Camp Lejeune.

Do you see that?

A. I see that.

Q. And on page 1 of the report, which is at 1-1 I think is what they refer to it as, at the bottom of the page under Purpose, the last full paragraph it says "AH Environmental consultants was retained by MCB"; right?

Which is MCB Camp Lejeune under contract number and then there's a number; correct?

A. Correct.

MS. O'LEARY: Object to form.

BY MS. BAUGHMAN:

Q. So I just wonder.

In your report, you -- you refer multiple times to the AH report as something that was commissioned by ATSDR.

Were you aware that AH was actually

retained by Marine Corps Base Camp Lejeune to do this work?

A. I know that by memory that somewhere they say that they were -- on the first page, it's written "ATSDR Support - Estimation of VOC Removal."

Q. I'm sorry. Which page are you referring to? Page 1-1?

A. No. I'm on the first, the cover page of Exhibit 38.

Q. Okay. It says "ATSDR Support," but who paid for the study?

A. Oh, I don't know.

Q. Who hired AH Environmental to do the study?

A. I don't know.

Q. Doesn't it say in the report that they were hired by Marine Corps Base Camp Lejeune?

MS. O'LEARY: Object to form and foundation.

The next part of the sentence you read said it was to assist ATSDR in obtaining information.

MS. BAUGHMAN: I'm going to

object. That is a speaking objection. That is a violation of the local rules and the federal rules. I ask that you not do it again.

MS. O'LEARY: I ask you not to misrepresent -- misrepresent the record.

MS. BAUGHMAN: I am not misrepresenting anything.

BY MS. BAUGHMAN:

Q. Dr. Hennet, who paid AH Environmental to do this report?

A. I do not who paid them.

Q. Okay. Who hired AH Environmental?

A. I do not know who exactly hired them.

Q. Okay. Do you know whether AH Environmental, in fact, was a consultant of the Navy and the Marine Corps related to Camp Lejeune-related matters?

A. Could be.

Q. You don't know either way?

A. I don't know either way.

Q. Okay. So turn please to page 4-2 of the AH report. There is a sentence in the middle

of page 4-2 that says:

"Because of the downstream recarbonation basin at that plant" -- and let's back up for a second.

There's a recarbonation basin at the Hadnot Point Water Treatment Plant; correct?

A. Can you repeat because I was reading. Sorry.

Q. Okay. There is a recarbonation basin at the Hadnot Point Water Treatment Plant; correct?

A. That's correct.

Q. Is there a recarbonation basin at Tarawa Terrace, or was there one?

A. I don't believe so.

Q. Okay. Was there a recarbonation basin or is there one at Holcomb Boulevard Water Treatment Plant?

A. I have to refresh my memory on this one. I don't believe so.

Q. Okay. So -- so you see the sentence right above it says:

"This variability is illustrated in pictures taken at the Hadnot Point Water Treatment

Plant."

Okay. And then they're talking about a vortex that formed, and then the next sentence says:

"Because of the downstream recarbonation basin at that plant" -- referring to Hadnot Point -- "the available head does not appear to allow a fall height of greater than approximately one foot and the effluent pipe is likely to be flowing full."

Do you see that?

A. I see that.

Q. Okay. Were you able to observe at any time that you were at the Hadnot Point Water Treatment Plant the available head given the presence of the recarbonation basin?

A. No, but I measured it. I measured the pipe.

Q. I'm not talking about the pipe.

Head refers to the -- the elevation of the water, does it not?

A. Well, head refers to a difference of elevation.

Q. Okay. Of the water; right?

A. Yes.
Q. Okay.
A. For water, yes.
Q. Okay. When you made your measurement at Hadnot Point of the spiractor, there was no water in the spiractor at the time; correct?
A. For the February 11 measurements, yes.
Q. Okay.
A. Not in the one I measured, yes.
Q. Okay. Let's back up.
Let's just talk about February 11, 2025.
When you made your measurements on that date, the spiractor did not have water in it; correct?
A. That specific spiractor. You have five of them.
Q. Okay. Did you make a measurement at a spiractor that did have water in it on February 11, 2025?
A. Couldn't be done, no.
Q. Okay. So did you at any point in

time make a measurement in a spiractor at any water treatment plant at Camp Lejeune that had water in it?

A. I did not do measurements when the spiractor was flowing water.

Q. Okay.

A. I couldn't.

Q. So I want to focus on Hadnot Point and the effect of the recarbonation basin on the water level in the spiractor.

Do you agree with AH that the head -- the available head does not appear to allow a fall height of greater than approximately one foot at the spiractor at Hadnot Point?

A. I do not agree with that, and I would go back to Figure 3-4 of the AEH report, which is on page 3-10 that you just referred to before. And there you can see where they put -- where they put the 12 inches, which is I think is what it is. It appears to be. I didn't measure it.

And then you can see there that the fall height is 12 inches. The pipe is not flowing full as claimed. And -- and I made some estimates

of for the flow you have through that pipe and the dimension of 12-inch for the pipe, the 6-inch that they have at the bottom would be -- would be basically the -- where the water level would be in the pipe when it normally flows.

Q. Well, what's in the diagram on Figure 3-4 is not consistent with the text on page 4-2; correct? Because 4-2 says "the effluent pipe is likely to be flowing full."

A. Right. That's inconsistent.

Q. Right.

A. And -- and I would -- I would refer to -- to the diagram because for the diagram for the estimate of the 6-inch, I made a calculation for the flow and the size of the pipe that basically the water level would be approximately 6 inches in it. That's what I recall.

Q. Okay. You're saying that AH Environmental did that, correct, not you?

A. AH Environmental did that and on -- on the statement in the -- in the text, it's -- it's a speculative statement because it says "it appears to be" and that's based on visual interpretation, which -- which are subjective in

that sense.

Q. So in your opinion --

A. So that --

Q. In your opinion, what effect did the downstream recarbonation basin have on the available head in the spiractors at the Hadnot Point Water Treatment Plant?

MS. O'LEARY: Object to form.

THE WITNESS: Well, it controls the head, but -- but, you know, I measured the pipe and you have 2 feet from the rim of the pipe to the top of the pipe, and that's what I did on February 11 and that's what I done the previous visit on the pipe that was on the truck. So I did measure those. I did not do a visual evaluation.

BY MS. BAUGHMAN:

Q. You did not do a visual evaluation of the head in the spiractor of Hadnot Point when it was running at any time; right?

A. I did not do measurements when the spiractor was running.

Q. Okay. Or -- and you didn't make a

visual -- have you -- have you actually seen the head, the height of the water in the effluent pipe or in the spiractor when it was running at any of the treatment plants?

MS. O'LEARY: Object to form.

THE WITNESS: No, you cannot see that because it is actually below what you can see.

BY MS. BAUGHMAN:

Q. Okay. If you look at your -- what we marked as Exhibit 11 to your prior deposition, your notes, you just mentioned something that you measured 2 feet.

A. Yeah. Well, I measured 18 inches and then -- and then I relied on the AHE diagram, and I agree with a pipe of this kind flowing would have about 6 inches at the bottom and that's 18 plus 6 brings you to 24 for a head.

Q. Okay. Is the effect of the -- there's no recarbonation basin at Tarawa Terrace; right? We already talked about that.

MS. O'LEARY: Object to form.

THE WITNESS: Yeah. Yes.

BY MS. BAUGHMAN:

Q. Okay. But you assumed the same -- the same fall height at Tarawa Terrace and at Hadnot Point; right?

A. I don't recall what I did for Tarawa Terrace.

Q. Well, we just talked about it. I mean, we can turn to your report. It's page 5-9.

A. (Reviews document.)

Q. Of Exhibit 31.

And you've assumed for Tarawa Terrace the exact same fall height as you assumed for Hadnot Point; right?

A. Yes, and I believe that's a reasonable assumption because the type of spiractors were the same.

Q. Right.

But there's no recarbonation basin in Tarawa Terrace. There never was.

A. There is no -- there is no recarbonation -- if I remember correctly, there is no recarbonation at Tarawa Terrace.

Q. Right.

So you haven't made any accounting for the fact there was a recarbonation basin at

Hadnot Point and not at Tarawa Terrace in your calculation? You've assumed it's the same for both?

A. As far as the fall height to the -- to the effluent pipe, yes.

Q. Okay. So the Hadnot Point spiractor is under normal circumstances covered; right? All of them. They have covers on them?

A. They have covers on them. I mean, partially opened covers and that has not always been the case since the start of the plant. That's my understanding.

Q. Okay. So is it your testimony that it's not possible to measure the fall height at the Hadnot Point Water Treatment Plant while the spiractor is operating?

A. Not under the conditions that I was there.

Q. Okay.

A. You would -- you would need a major project to do that.

Q. So you haven't done that?

A. I have not done that.

Q. Okay. If you look at AH

Environmental Figure 3-10, which, by the way, that figure is also in your report; right? You reproduced that AH figure in your report, didn't you?

A. Yes.

Q. That in your report it's on page 5-4 of Exhibit 31. It's the exact same diagram; right?

A. I believe so, yes.

Q. Okay. And I'll let you get there. Okay.

So one thing I want to ask you is: That diagram, it's Exhibit 2-2 in your report and 3-4 in the AH report, it seems to show like a 90 degree angle. It's showing like it goes down and then it goes to the right, doesn't it?

The diagram appears to show the spiractor has a 90 degree angle.

Would you agree?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, and that was the basis of the AEH calculations --

BY MS. BAUGHMAN:

Q. Right.
A. -- to the schematic for that.
Q. But it's not the spiractor pipe. You've observed it. You've taken pictures.
The spiractor pipe is not a 90 degree angle, is it?
MS. O'LEARY: Object to form.
THE WITNESS: No, it is more like a J-shaped pipe.
BY MS. BAUGHMAN:
Q. Right.
And when we talk about fall height, does that mean like -- that means the vertical distance.
It's not -- it's not a diagonal distance for the fall, right, for a weir?
MS. O'LEARY: Object to form.
THE WITNESS: Well, it is a vertical distance on a weir, yes.
BY MS. BAUGHMAN:
Q. Right.
When we refer to fall height, we're talking about the vertical fall, correct, top to bottom?

A. Yes, that's -- that would be a fall height for a weir, yes.

Q. Okay. And the calculation that both you and AH used for the spiractor volatilization is a calculation regarding a weir; right? It's assuming that this acts as a weir?

A. Yes, that's what AEH did and I just use the same approach.

Q. Okay. Can you turn to Exhibit 39 and just to be -- let's just establish first.

Exhibit 39. These are the photos taken -- well, they're all marked February 11, 2025?

Do you see that? They all have that marking on them with the date?

A. I see that.

Q. Okay. So these are from your visit to the Camp Lejeune site on February 11, 2025.

That's what Exhibit 39 is; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Not all pictures have dates on it, but I think you're correct. This is what I recall.

BY MS. BAUGHMAN:

Q. Okay. And if you could turn to page 28 of Exhibit 39.

What are we looking at there?

A. Hold on. Hold on.

Okay.

Q. What is -- what is this a picture of HENNET_USA 28 in Exhibit 39?

A. This is a photograph taken from the opening from the covers that is on top of the spiractors that was not in use, that means it had no water in it, and that is you have the spiractor pipe as you can see the G -- the J-shaped pipe. It's kind of laying down.

And then you have -- you have a scale that was just basically put against the pipe the best we could, and a picture was taken of that.

Q. Okay. So Exhibit -- I'm sorry.

Page 28 of Exhibit 39, this is a spiractor -- a pipe in the spiractor at Hadnot Point Water Treatment Plant; right?

A. That's the pipe where I conducted measurements, yes.

Q. Right.

Hadnot Point Water Treatment Plant; right?

A. At Hadnot Point Water Treatment Plant.

Q. Okay. On February 11, 2025; right?

A. Correct.

Q. Okay. And that what we see there, that is a measuring tape trying to measure the -- the fall height; right?

A. No. The measuring tape is there to kind of give the best you can a reliable scale against the pipe.

Q. Okay. And from page 28 of Exhibit 39 we can see that this is the J-shape, as you call it, pipe.

It is not a 90 degree angle; correct?

A. It is a J-shaped pipe. Correct.

Q. Okay. And if we were talking about what is the fall height, it would be from the top of the rim of that pipe going straight down; right? That's the fall height?

A. That would be the fall height for

the calculations or the fall height for the weir, yes.

Q. Okay. And if you look at your measuring tape, doesn't it look like the fall height there is about 13 or 14 inches?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: No, that's a visual effect because -- that's the best we could do, but that's a visual effect because you don't go -- the picture is not -- provides a visual effect because you don't have the tape all against the pipe, and it is distorted. So.

BY MS. BAUGHMAN:

Q. How is it distorted?

A. The visual effect is distorted and, you know, we measured that differently. You don't only have -- this is only one picture that was taken of that attempt there.

Q. Well, it looks like -- based on this picture, it looks like that vertical distance is 13 inches, doesn't it?

MS. O'LEARY: Object to form

and foundation.

THE WITNESS: No. Whatever you want the picture to say it looks like, you have to understand that it's -- it is basically distorted photograph. It's not good enough for measurement, and we did all the measurements to kind of get at that.

BY MS. BAUGHMAN:

Q. Which picture in Exhibit 39 demonstrates the fall height that you measured?

MS. O'LEARY: Object to foundation.

THE WITNESS: Well, I do not -- I cannot answer that, but it seems that you may not have all the pictures that I took here. I don't know. I don't know. I cannot verify that. It seems that you cherry-picked one.

BY MS. BAUGHMAN:

Q. Dr. Hennet, I did not cherry-pick anything. I have provided you with every -- a picture of every photograph that was provided to us from February 11, 2025. Okay? So don't accuse

me of that. Okay? This is everything that the DOJ produced.

So can you show me which photograph in Exhibit 20 -- 39 demonstrates, in your opinion, the fall height?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Yes, yes, and give me a minute. Okay.

(Reviews document.)

Okay. I would go to a series of pictures for this, and let's say you have a Bates number that ends with 008.

That one is a measurement of the -- of the diameter of the effluent pipe. That's a measurement because that one is not distorted because the tape is touching one end of the pipe and coming all the way to the -- to the other end, and I think that that was something like --

BY MS. BAUGHMAN:

Q. Okay. But 008 does not give us --

A. Okay.

Q. -- a measurement of the fall height, does it?

MS. O'LEARY: Object to form.

THE WITNESS: I am going there.

BY MS. BAUGHMAN:

Q. I am just asking you that question.

A. It doesn't. It doesn't.

Q. It does not?

A. No.

Q. Okay.

A. Okay. Now you have 009. Here you have a distance that is measured from a bar, a horizontal metal bar, using the rope to basically get the distance from the top of the pipe to the bar. So that's a distance that is relevant for getting the fall height.

Q. Okay. So when we look at page -- at page 9, how can we tell what that measurement is from the picture?

A. Well, you have several steps in. That -- that measurement with the rope is actually taken with a tape outside of the -- of the opening of the spiractor because you could not do it right

there.

Q. Okay. So there's no way by looking at picture 9 on Exhibit 39 we could make that measurement; correct? Not by looking at the photo?

A. Hold on. Hold on.

Q. Just answer that question.

MS. O'LEARY: No. Object to form.

BY MS. BAUGHMAN:

Q. No. I'm asking, Dr. Hennet, you just brought up page 9.

Is there a way with the photo on page 9 to make a measurement?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: The measurement is done and illustrated in -- in additional photographs where the lengths of the rope is being measured with a tape.

BY MS. BAUGHMAN:

Q. Okay. Show me where that is.

A. I am looking for it.

(Reviews document.)

Okay. That will be photograph 003.

Q. Okay. It's a measurement of a rope, but we don't know, we can't tell from the measurement where the rope was; right?

A. Well, I am telling you where the rope was by showing you 009. That basically is the way we had to do it.

Q. Okay. So you're saying that -- that from that what we're seeing there is from that pipe on 9 all the way to where? To what part of the bottom of the spiractor?

A. Not to the --

Q. To --

A. It is to the top of the pipe of the spiractor, just after it stops turning is a J.

MS. BAUGHMAN: "Just after it stops turning is a J." So it's -- I tell you what we'll do.

I'm going to mark as Exhibit 41 a copy just of page 9.

(Document marked for identification as Exhibit 41.)

BY MS. BAUGHMAN:

Q. And I'm going to give you a pen, and I want you to show me from right on Exhibit 9 where the rope was that you measured. Just draw the rope.

A. The rope is here. (Marks document).

Q. Okay. Can I see that, please?

A. (Hands document).

Q. So if you look at Exhibit 11.

A. Exhibit 11.

Q. In your diagram there, you're showing 18 inches from where to where?

Don't write on this yet, on Exhibit 41, but show me where that 18 inches would be.

A. Well, it would be from the rim elevation down. That would be this portion. Because then we measure this distance on another photographs, but we measured that distance from there to the rim. And then you just subtract that from the length of the rope, and then you have the distance from the rim to the top of the pipe, and that's 18 inches about. And I made a note that it was difficult to measure. So it's --

Q. Okay.

A. It is an estimate --
Q. So.
A. -- plus or minus an inch or so.
Q. Okay. So use the pen here and go ahead and, like, mark where the 18 inches is. Write 18 inches so we can see what you're talking about.
MS. O'LEARY: Object to form.
BY MS. BAUGHMAN:
Q. Go ahead. Go ahead.
A. Yeah. Again, you are just asking me to do something. Just the accuracy of it you can always talk about. But you have to -- you have to go and -- it's -- we measured this distance here. (Marks document).
Q. What -- but I'm looking at your -- your diagram --
A. And then --
Q. -- on Exhibit 11 and you're saying 18 inches based on this work. So I'm trying to understand where that 18 inches is.
A. And I'm trying to explain that to you.
Q. Okay. Can you show us?

A. Well, I can show you.
This is one measurement. Right?
Q. Okay. But you have to say --
A. That's the length of the rope.
Q. -- what "this" is. What --
A. That's -- that's what we --
Q. For the record, when you say "this is one measurement," what are you referring to? What's the number of that photo?
A. This is -- sorry, yes. It is 003. Okay?
Q. Okay. All right.
A. This is one measurement that's total length of that hole that you have here --
Q. Okay.
A. -- vertically.
Q. So that the line that you've drawn on what we've marked as Exhibit 41 is the measurement on page -- on the photo number 3; right?
A. Yes.
Q. Okay. Now, where's the 18 inches that you're -- you're indicating on Exhibit 11 exists? What -- what is that?

A. The next step is this one. It's Exhibit 012.

Q. Okay. And that's showing 11 inches?

A. From the top of the bar, which is always on top, to the rim.

Q. Right.

A. Right? So that would be this here.

Q. Right.

A. Right? And then on 003, you can see that to the top of the bar, it's about 28 inches. The lengths of the rope. Right?

Q. Right.

A. Then here you have this 11. Right?

Q. Right.

A. And -- and you have basically 28 minus 11, that's 17 but, you know, that it's -- it's approximate. So this is -- this is where the 18 comes from.

That this -- this is 012 that give you the 11, 11 inches from the top of the bar to the rim. Right?

Q. Uh-huh.

A. And then you have this that gives you the entirety of the -- from the top of the bar

to basically the top of the pipe.
Q. Right.
A. And that's about 28 inches.
Q. Uh-huh.
A. So you subtract 11 from the 28 inches and that -- that gives you -- it will be 17, but I --
Q. Okay. Can you show me? Go ahead and mark it on the diagram there, the 18 or 17 inches. Show us where that is.
MS. O'LEARY: Object to form.
THE WITNESS: It's difficult on that.
You have the 11 here and you have the 28 there.
BY MS. BAUGHMAN:
Q. Right.
But first on Exhibit 41, where is the 18 inches?
A. Exhibit 41.
MS. O'LEARY: Objection.
BY MS. BAUGHMAN:
Q. This one.
A. On this photograph on 009?

Q. Right.
A. Well, it's going to be somewhere. You have to subtract.
Q. Right.
Just mark it so that -- so that -- so that the court will understand what you're saying.
MS. O'LEARY: Object to form.
He's just said it's hard to see on that photo.
BY MS. BAUGHMAN:
Q. That's the photo you showed me that was the best illustration of your measurements; right?
MS. O'LEARY: Object to foundation.
THE WITNESS: It's a step-wise approach. You need more than one thing to illustrate the -- the measurements that I took.
You have this one which gives you 28 inches. Right? This is this.
BY MS. BAUGHMAN:
Q. I understand.

A. You have this one. By "this one" I meant 003.

And then you have 012 that give you 11 inches.

And then you have this one that shows you that these lengths minus -- the lengths that is on 003 minus the lengths that is on 012 --

Q. Okay.

A. -- gives you basically the distance between the rim and the top of the pipe.

Q. Okay. So just -- so draw --

A. The top of the pipe.

Q. Mark the distance from the rim to the top of the pipe on there.

MS. O'LEARY: Object to form.

THE WITNESS: I don't know how to do that.

MS. BAUGHMAN: Are you instructing him not to do it?

MS. O'LEARY: No. I'm objecting to the form. He doesn't have to do it, but I'm not instructing him not to.

BY MS. BAUGHMAN:

Q. Okay. Go ahead.

A. Right. It is difficult to do here because if I do something on this, you are going to make something of it that I didn't mean it to be and that's --

Q. Do this for me.

Where is the fall? If you were measuring the fall height, if you could measure the fall height; right?

A. Okay.

Q. Without this experiment. What is the fall height?

A. Yeah, yeah.

Q. From where to where on that document?

A. Not at the fall height yet. We are at the distance between the rim and the top of the pipe.

Q. Okay. I'm asking you a different question now.

Where is the fall height?

A. The fall height would be to where the level would be in this 12-inch pipe or in this pipe as estimated by AHE -- AEH, and that's about

6 inches of here. So that would be something from -- again, on this photograph, it's difficult to do because you have a -- you have a visual this.

Q. Let me ask you.

Wouldn't the fall height -- and I understand people can't see what I'm doing. I'm just.

Wouldn't the fall height be from this rim to where the water level is? Isn't that the fall height, or not?

MS. O'LEARY: Object to form.

THE WITNESS: That would be from -- from this -- this rim to basically, yeah, something like this.

BY MS. BAUGHMAN:

Q. Okay. So can you draw for me if you are able to, whether you measured it or not, what the fall height is so we understand what that is?

MS. O'LEARY: Object to form.

THE WITNESS: I gave you that on my notes, and I'm telling you that the basis for that is this here.

Drawing on photographs that

are distorted like this is not something that's scientific.

BY MS. BAUGHMAN:

Q. Well, these are -- those are photos that you took; right? Or you directed to be taken at your site visit?

A. Those are photographs and the measurements are on 003, 012, and then you have the 6-inch water level from AEH in the pipe. And the dimension of the pipe is basically 12-inch approximately.

Q. Okay. So are you refusing to draw the fall height on Exhibit 41, your picture marked number 9? You won't do it?

MS. O'LEARY: Object to form.

THE WITNESS: It's described in my report and the fall height, the fall height is from the rim to the water level in the pipe when it's operating.

BY MS. BAUGHMAN:

Q. Okay. But you don't want to draw it?

MS. O'LEARY: Object to form.

THE WITNESS: I don't feel

comfortable to draw it on a picture that is distortion.

BY MS. BAUGHMAN:

Q. Okay. And why and what -- why is Exhibit 9 distorted? What's distorted about it?

A. Because it is a photograph of something that is actively that is one dimensions and the photograph itself is, you know, one dimension things with distortions. That's what happens. That's why you can -- it is very difficult to do visual evaluation if you don't do measurements because the distortion just leads you to -- to estimates that are not correct.

Q. And how do you know -- when you did -- when you dropped the rope down, how do you know that the rope was straight? Could you see the rope?

A. Yes, I did see the rope --

Q. Okay.

A. -- and it was straight.

Q. Do you have a picture of the rope hanging down when you made the measurement?

MS. O'LEARY: Object to foundation.

THE WITNESS: It is on 003.
BY MS. BAUGHMAN:
Q. No, no, no.
I mean, when you dropped the rope down, right, to figure out the length there, do you have a picture of you when you did that?
MS. O'LEARY: What's the exhibit number you're pointing to?
MS. BAUGHMAN: Number 1.
THE WITNESS: Right. It is on 009.
BY MS. BAUGHMAN:
Q. The rope? No, you drew the rope on 009.
A. No. This is on 009. This one is a different one. You go to Exhibit 40 and this is 009 on Exhibit 40. There I did not draw anything on 009 in Exhibit 40. You made me draw something on Exhibit 41.
Q. Hold on a minute.
A. And what you can see there is a rope.
Q. But those are the same picture.
A. They are the same pictures, but

there you made me draw on it.

Q. Okay. Did you just draw on top of what the rope -- of where the rope was?

A. That's what you asked me to do.

Q. Okay. All right. Okay.

And is there any kind of a -- there's no measurement or scale on HENNET_USA 9 that would allow us to measure that rope distance; correct? Independent of what you-all did?

A. You don't have -- I couldn't put a scale on there. Otherwise, I would have done it.

Q. Okay. Okay. And other than the diagram that's drawn on Figure 3-4 of AH, do you have any other basis to disagree with the statement in the AH report that the effluent pipe is likely to be flowing full in the Hadnot Point Water Treatment Plant spiractors?

MS. O'LEARY: Object to foundation.

THE WITNESS: In the AEH's report, somewhere in there, it just says that I made calculations for the condition of the pipe using a dimension of 12 inches for the pipe, and at the

flow rate that comes out of the spiractors, I estimated that the depths of water in the pipe is 6 inches.

BY MS. BAUGHMAN:

Q. And where is that calculation in your report?

Is that in your report?

A. I -- I just -- I just used the AEH diagrams that I put in my report and it is there.

Q. I know.

Is that calculation in your report?

A. The calculation for -- for what?

Q. For -- for -- you just said you did a calculation to see whether the level of water in the pipe would be 6 inches based on the -- the amount of water going through the spiractor or through the water treatment plant.

I was just wondering: Is that calculation in your report?

A. I didn't do that calculation.

MS. O'LEARY: Object to form.

THE WITNESS: The EA -- AEH did that calculations, and it is a reasonable answer.

BY MS. BAUGHMAN:

Q. I want to ask you something else about the AH report while we're here.

If you could turn to pages 3 -- page 3-8 first of the AH report, Exhibit 38.

A. Yes.

Q. And there is a picture of the Hadnot Point Water Treatment Plant spiractor effluent pipe and it's labeled "1941/1942."

Do you have any reason to believe that the date of that photograph is not correct?

MS. O'LEARY: Object to foundation.

THE WITNESS: I have no understanding of the source of the photographs and it's not described. So this is -- this is -- this is what it is.

BY MS. BAUGHMAN:

Q. Right.

But do you have some reason to believe that the date is incorrect as stated by AH in its report?

MS. O'LEARY: Object to form.

THE WITNESS: With the

exceptions is I don't see where it comes from. So whether it is even -- I have no -- I have no information that would -- that would basically tell you where that picture actually comes.

BY MS. BAUGHMAN:

Q. Right.

A. Except what is written under it.

Q. Right.

A. And that's what it is.

Q. Okay. So the next page, on page 3-9 they have a spiractor effluent pipe for Hadnot Point labeled "1944/1945."

Do you have a basis to believe that that date is incorrect?

MS. O'LEARY: Object to form.

THE WITNESS: Same thing. I have no way to verify if this is from there and if it is from that date.

I -- I don't know but you see --

BY MS. BAUGHMAN:

Q. But do you have -- what I'm asking is: Do you have information that leads you to believe that's the wrong date?

A. I have no information to verify this. None.

Q. Either way?

A. Either way.

Q. Okay.

Okay. Okay. I want to ask you some questions about the water buffalos. And while we're -- while we've got Exhibit 39 handy, the pictures from February 11th, let me ask you a few questions about those photos.

If you turn to page 89, what is that a picture of?

A. This is a photograph of a station basically where water buffalos can be filled up at the base.

Q. Okay. And are they filled up through that red hose?

A. Yes.

Q. Okay. Is there any reason that when the water buffalos are filled up, the Marines can't just put the hose right into the tank instead of holding it above the tank?

A. Well, they have to hold it because with the pressure that goes through that pipe, it

will just leave the water.

Q. I see.

But is there any reason they can't put it inside the water buffalo to fill it up instead of holding it above the water buffalo?

A. Well, when I observed it, I did it, the way I did it is, I kept the hose on top of the --

Q. Right.

A. -- on top of the water.

Q. So your observation was in February of 2025; correct?

A. That's my observation, yes.

Q. Did you have any conversations with any Marines about what the normal protocol is to fill a water buffalo?

A. They told me that. So I did it. I didn't instruct them to do it in any way.

Q. So you did have a conversation with the Marine?

A. No, no. I did not have a conversation with the Marine themselves. I just came up with the water buffalo, and I just climbed on it to be able to take pictures. And then they

they say -- I just told them, fill it up.
Q. Okay.
A. I mean, do it and that's it.
Q. So that's --
A. That's all. That's all my conversation with them. That's it.
Q. Got it. Okay.
Have you had any conversation with any other individual regarding how water buffalos were filled up at Camp Lejeune?
A. I have not had conversation about that because -- but there is information that in the historian report that shows how it should be done and so on.
Q. Okay.
A. And how it was done over time.
Q. Okay. You're referring to the DOJ's expert's -- historian expert's report; correct?
A. Yes.
Q. Okay. Have you yourself done any investigation, independent of the historian, on how water buffalos were filled up at Camp Lejeune, other than watching this one be filled up in 2025?
A. Well, yes, I looked for information

that describes, you know, the geometry of the water buffalos, what -- what they weigh. And I found what I found, and based on that, I just -- I just understood that for the water buffalos that I found information on the dimensions of, they were filled up through the filling hole by connecting the hose to the filling hole that there's a strainer to it.

That's -- that's what I recall. I think it is in my report the diagram of the water buffalos, and that's what I relied upon to say this is the way a water buffalos was filled up.

Q. Okay. So other than looking at the dimensions of water buffalos, did you do anything else to investigate how water buffalos were filled at Camp Lejeune?

Let me strike that and start over.

Other than watching one water buffalo be filled up in 2025 and reviewing the dimensions of water buffalos, did you do anything else to investigate how water buffalos are filled up?

MS. O'LEARY: Objection and foundation.

BY MS. BAUGHMAN:

Q. Your investigation, not the historian.

MS. O'LEARY: Object to form and foundation.

THE WITNESS: I relied on the -- I borrowed the information that the historian had put together, which is more than what I had found on water buffalos and, you know, the protocol of filling it and so on over time.

BY MS. BAUGHMAN:

Q. Okay. I'm just trying to get the universe of what you're relying for how water buffalos were filled up.

So we know you're relying on the historian's report, the DOJ's historian.

A. Uh-huh.

Q. We know you're relying on watching one water buffalo be filled up in February 2025. And we know you're relying on the dimensions of the water buffalo.

Is there anything else you're relying on?

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. For how water buffalos were filled up at Camp Lejeune?

MS. O'LEARY: Same objection.

THE WITNESS: Well, you know, that I mention and so are in my report. Right? I -- in an appendix of my report, you have water buffalos with the dimensions marked on them.

BY MS. BAUGHMAN:

Q. We -- that's one of the three things I mentioned.

Is there anything else?

A. Well, I have also, you know, I have seen all of a sudden after my report two affidavits by people who apparently witnessed water buffalos being filled.

Q. Okay. There's that.

Anything else?

A. And that was new to me.

Q. I understand.

A. That was major reason why I went

back to kind of look at that.

Q. Right.

Anything else?

A. That's all I can think about right now.

Q. Okay. So do you have any information that leads you to believe that when Marines filled up water buffalos at Camp Lejeune, they did not put the hose inside the water buffalo to fill it up?

MS. O'LEARY: Object to foundation.

THE WITNESS: I have seen descriptions that you would hook up the hose to the filling hole, the filling port that is a strainer. I have seen that.

And then I have seen the information that some water buffalos were filled up through the manhole, and that came with those affidavits that came after my report on that.

And also in Dr. Sabitini's rebuttal report to my report, it says the

water buffalos sometimes are filled up through the manhole, and that was the reason why I just wanted to see how do I do it today, and that's what I did.

BY MS. BAUGHMAN:

Q. I'm going to respectfully object as nonresponsive, and maybe you don't understand my question. So I'm going to try it again.

When you -- okay. Let me just ask you. Let me back up.

You watched one water buffalo be filled up in February 2025; right?

A. That's right.

Q. Okay. Before that, had you yourself ever seen a water buffalo be filled up?

A. Not before that.

Q. Okay.

A. Hold on. Except on a video that Dr. Sabatini put in his report.

Q. Okay. So when you wrote your report in December of 2024, you had never seen a water buffalo be filled up; correct?

A. No. The only information I had is what I have in my report and information in the

historian report.

Q. Right.

So that means when you signed your report on December 9, 2024, you had never seen a water buffalo be filled up; correct?

A. Personally, I have never seen.

Q. Okay.

A. I had never seen a water buffalo being filled up --

Q. Okay.

A. -- by then.

Q. So it's possible to fill a water buffalo by taking that red hose and putting it inside the tank to fill it up; right?

A. Everything is possible.

Q. Okay. What's your basis to say that was never done?

MS. O'LEARY: Object to foundation.

THE WITNESS: Maybe it was done, maybe it was not, but it was also done through the -- through the port, the filling port. That's documented, and it was also done as I observed it.

And it was also done as Dr. Sabatini attachment to his report, which is a YouTube video of the filling up of a water buffalo. That's -- and in that case, I did it basically the same ways I observed.

BY MS. BAUGHMAN:

Q. All right. So you have not done any calculations regarding the amount of volatilization that occurs during the filling of a water buffalo through a manhole cover; right?

A. No. I have observed it and I have seen the extensive aeration that occurs, and I have basically concluded that it's quite similar as far as losses are concerned than the calculated losses that I have in my report --

Q. Okay.

A. -- that where the water buffalo was filled up through a strainer.

Q. I'll object as nonresponsive.

I just want to know: Have you done a calculation? Have you done a calculation on the amount of volatilization that occurs when you fill a water buffalo through a manhole cover?

A. I have not done --

MS. O'LEARY: Object to form.

THE WITNESS: Sorry.

I have not done additional calculations to from what is in my report because I consider that it was similar.

BY MS. BAUGHMAN:

Q. Okay. And in your report, you don't have a calculation on the volatile -- the amount of volatilization from filling a water buffalo through the manhole cover; right?

A. I have it through calculations through a strainer in my report.

Q. Not through the manhole cover?

A. Not through the manhole cover.

Q. Okay.

A. And then what I observed led me to conclude that it was pretty similar.

Q. Okay. I'll object as nonresponsive to everything after "not through the manhole cover."

When you observed that one water buffalo being filled in February 2025, did you make any measurements related to volatilization?

A. I didn't do measurements, but I did observations.

Q. Okay. And this may be obvious, but I just -- I just want to ask you.

So when we're talking about the contaminants that -- that were in the water at Camp Lejeune -- PCE, TCE, the other VOCs -- if they're volatizing out of the water, right, you couldn't see them; right?

A. I couldn't see them, but I could smell the chlorine, which is also volatile organic compound. And when you do that, I could smell the chlorine coming out.

Q. Okay. And you can't see the chlorine either; right?

A. You cannot see it but --

Q. Okay.

A. -- I could -- I could smell it, and then that's why you go to geochemistry to estimate the partitioning.

Q. Okay. So did you do a calculation on how much VOCs would come out of the water when you fill a water buffalo based our chlorine smelling?

A. Not based on that. That's an observation.
Q. Okay.
A. I didn't do a calculation on it.
Q. Okay.
A. It's an observation.
Q. Did you make any measurement on how much chlorine was coming out of the water when the water buffalo was being filled?
A. I did not measure that. I didn't have the -- what would have been needed to do that, no.
Q. Okay.
A. And also I would like to take a break at some point.
MS. BAUGHMAN: We can take a break right now. That's fine. Okay? Going off the record.
THE VIDEOGRAPHER: Time is 11:31 AM. We're now off the record.
(A recess was taken.)
THE VIDEOGRAPHER: The time is 11:42 AM. We are now on the record.
BY MS. BAUGHMAN:

Q. All right. Dr. Hennet, I want to ask you a few more questions about Exhibit 40, which are the pictures from a prior visit of yours before 2025 to the Camp Lejeune.

Have you got that in front of you?

A. Yes, I do.

Q. Okay. Can you tell me -- the one that's page 3, we're looking at CLJA PHOTOS SSPA number 3.

What's that a picture of?

A. This is a picture of the top of -- the best I can recall -- the top of a spiractor.

Q. Do you know at which plant?

A. I think this one would have been Hadnot Point.

Q. Okay. And can you -- is it possible to measure the fall height based on this picture?

A. You cannot access it, no.

Q. Okay.

A. You cannot see it either.

Q. It looks like -- from the picture, it looks like the water is full all the way to the top.

Is that true?

MS. O'LEARY: Object to foundation.

THE WITNESS: No, I don't think so.

BY MS. BAUGHMAN:

Q. Okay. If you turn to page 7 of Exhibit 40, what's that a picture of?

A. That's a picture of a water buffalo.

Q. And we're talking a little bit earlier about how in your report, your December 2024 report we've marked as Exhibit 31, you did calculations assuming there was a filler pipe with a strainer, right, and that's how it was filled through that filler pipe with a strainer; right?

A. That's correct.

Q. Okay. Is there a flow pipe with a strainer on the water buffalo picture in page -- on page 7 of Exhibit 40?

A. Not -- not on this one.

Q. Okay. So you -- you observed some water buffalos, even if you didn't see them filled, in your prior visit to Camp Lejeune, correct, before 2025?

A. Yes, parked.

Q. Did you look for the -- the filler pipe with the strainer while you were there?
A. This one didn't have one. So.
Q. Okay. So you knew that some water buffalos didn't have that?
A. In 2024 I knew that, yes.
Q. Okay. Did you do an investigation to see during what years the water buffalos had a filler pipe with a strainer?
A. Outside of what I mentioned before, you know, which is the historian report as well as the schematics of water buffalos historically, I have nothing else.
Q. Okay.
A. But in '24 this one that I saw had no -- no filler pipe.
Q. Okay. If you look at page 12, that's the picture of a spiractor that was sitting on a truck bed; is that right?
A. Yes.
Q. And that was found near the Holcomb Boulevard Water Treatment Plant?
A. I think it was either on a truck bed parked next to the Holcomb Boulevard.

Q. Okay.
A. I believe so, yeah.
Q. All right. So if you turn to picture 20 of Exhibit 40, is that another picture of a water buffalo?
A. That's correct.
Q. And, again, there's no filler pipe with a strainer on this one?
A. Yeah, again 2024, water buffalo.
Q. Okay.
A. I took a picture of it.
Q. Okay.
A. I mean, I had a picture of it taken.
Q. Then if you turn to page 25, is that a -- is that that -- the same spiractor that was sitting on the truck bed near the Holcomb Boulevard Water Treatment Plant?
A. Yes.
Q. Okay. And you used your -- your card there, your Metro card as a scale?
A. That's not mine but...
Q. That's what was used for the scaling?
A. That's what was used for the

scaling, yes.

Q. All right. So again we turn to page 39. It's another picture of a water buffalo; right?

A. It's a picture of a water buffalo. I don't know if it's the same one or not. I don't know but --

Q. Okay.

A. -- it is, yes.

Q. Again, there's no filler pipe with a strainer on that one; right?

A. No. That's again 2024. This is what I saw.

Q. Okay. And then picture 42. This is similar to a picture we saw from your 2025 visit.

This is where the Marines would fill up the water buffalos?

A. Yes.

Q. Okay. All right. When you were writing your report, your December 2024 report, did you review the technical manuals that came with the water buffalos that explained how the water buffalos should be filled up?

MS. O'LEARY: Object to

foundation.

THE WITNESS: I don't recollect that. You have to show me that.

BY MS. BAUGHMAN:

Q. Were you aware when you wrote your report in December 2024 that some water buffalos during the time frame of the 1950s through 1986, in fact, did not come with the filler pipe with a strainer? Did you know that?

A. I didn't know that then.

Q. Okay.

A. With the exception of what was in the historian report, and I don't recollect the details of that.

Q. Okay. I want to ask you some. If we could turn to your report, Exhibit 31. And turn to a different subject here. If we could turn to page 5-29.

Are you there? Okay.

So you've opined that there was a what you call a long-time average TCE concentration of 227 micrograms per liter for water supplied by the Hadnot Point Water Treatment

Plant; right?

A. You have to show me where I say that.

Q. Sure.

The first paragraph under your exhibit on page 5-29. Look at that last sentence. You say:

"Considering that Hadnot Point or HP-651 was being pumped 39% of the time yields a TCE long-time average concentration of 227 micrograms per liter for Hadnot Point Water Treatment Plant supplied water."

Do you see that?

A. Yes, I do.

Q. Okay. And this -- so -- so your calculation of 227 micrograms per liter for the long-time average is based on the 39 percent, right? The Hadnot Point water 651 was being pumped 39 percent of the time; correct?

A. Yes.

Q. And also based on your calculation of an average concentration for TCE in Hadnot Point Water Treatment Plant from January 21, 1985 to February 5, 1985 of 582 micrograms per liter;

right?

A. Yes.

Q. Okay. And in case you didn't -- you seem hesitant. Look at the first sentence of that paragraph. You wrote:

"The average concentration measured for TCE at Hadnot Point Water Treatment Plant over the period January 21 through February 5, 1985, is 582 micrograms per liter."

Do you see that?

A. Yes, I do.

Q. So to get to the 227 for the long-time average, you had two inputs to that calculation, the 39 percent and the 582; right?

A. Yes.

Q. Okay. So I want to ask you first about the calculation of the average concentration for TCE at the Hadnot Point Water Treatment Plant of 582. Okay? I want to talk about how you reached that number. Okay?

So first let's -- let's look at page 5-23 of your report.

A. Yes.

Q. Okay. And in the paragraph at the

top of the page in the middle, you refer to these 18 water samples; right? You see that in the middle of that paragraph you say:

"Eighteen water samples were collected from locations in the two distribution systems."

Okay? And that's referring to this time frame when the Hadnot Point Water Treatment Plant was supplying water to Holcomb Boulevard; correct? That --

A. Yes.

Q. -- January 27 to February 5, '85 time frame; right?

A. I think that's correct.

Q. Okay. Look at the sentence right before:

"During that period of time" -- right, referring to January 27 to February 5, '85 -- "HP-WTP, the Hadnot Point Water Treatment Plant, supplied the entirety of the water in the Holcomb Boulevard system which was shut down following a fuel release incident."

Do you see that?

A. Yes.

Q. So during that time frame, these 18 water samples were collected from the two distribution systems, and then you say:

"The average TCE concentration in the treated water was 582."

Right?

A. Yes, that's what I say.

Q. Okay. So look at -- let's look at page 5-24 of your -- hold on.

We look at page 5-27 of your report, which you've labeled as Exhibit 5-3.

You see the title of that Exhibit 5-3 is "COC Concentrations in the Holcomb Boulevard and Hadnot Point Systems During Shutdown of Holcomb Boulevard Water Treatment Plant: January 27 to February 5."

And you say the water -- okay.

So these are the 18 numbers that you used to calculate the average; correct?

A. Well, it's probably correct. I don't know.

Q. Well, I have questions about it. So I want to make sure we're on the same page.

You did the calculations; right?

A. Yeah.
Q. Okay. Okay. So if you go back to page 5-23 in your report?
A. Yes.
Q. In the last sentence says -- okay. So the 582 let's go back to that.
"Eighteen water samples were collected from locations in two distribution systems. The average TCE concentration of treated water was 582 micrograms per liter."
Do you see that statement? Are with me?
A. I see the statement, yes.
Q. And then the last sentence, or you go on to say:
"The data for the period January 27 to February 5, 1985 that contains the data for the period when the Hadnot Point Water Treatment Plant was providing 100% of the Holcomb Boulevard water supply are summarized in Exhibit 5-3."
Right?
A. That's what it says, yes.
Q. Okay. So the data to calculate this average of 582 micrograms per liter are in

Exhibit 5-3; correct?

A. Well, you know, I have to refresh -- to double-check that, but I think it appears to be correct.

Q. That's what the report --

A. Yeah.

Q. -- says; right?

A. (Reviews document.)

Yes, I think that's correct.

Q. Okay. So I want to ask you about that, this data that were used to calculate the -- the 582 microgram per liter average TCE concentration. All right?

Exhibit 5-3 shows the location where those samples were taken; correct?

A. Yes.

Q. Okay. So just for reference, building number 20 is the Hadnot Point Water Treatment Plant; right?

A. Yes.

Q. Okay. And so the last entry on page 527 for building number 20, that sample date was February 5, 1985.

Do you see that?

A. Yes.
Q. Okay. And the value for TCE was 429; right?
A. Yes.
Q. Okay. But that sample was taken the day after HP-651 had been shut down; correct?
A. Same day or the day after. I don't know.
Q. Well, look at the heading of your Exhibit 5-3 on this page. Right in the heading of your Exhibit 5-3 it says --
A. Yes.
Q. -- "Supply Well HP-651 Was Shut Down on February 4, 1985"; correct?
A. Yes.
Q. Okay. So this sample of 429 for building 20 was taken a day after HP-651 was shut down; correct?
A. Yes, and -- yes, and it represent treated water that is in the reservoirs. Yeah.
Q. Right.
But the whole point of doing this calculation is to figure out what the concentrations were when HP-651 was running;

right? Was being pumped?

A. Yeah. Well, it was, the calculation is what was the water that was delivered on average, what was the concentration on average in the water that was delivered in -- in both areas until February 5. That's what I recall.

Q. Well, let's go back to page 5-23.

A. Here we go.

Q. The first sentence on page 5-23 of your report says:

"There is available data for COC concentrations in treated water from Hadnot Point Water Treatment Plant over the period January 27 to February 5, when it is known that supply well HP-651 was being pumped."

Okay. Is it the whole point of this calculation of you're trying to figure out the average TCE concentration in the water while HP-651 was being pumped; right?

A. No. Actually, this is when the -- when the water that was supplied to both system was coming from Hadnot Point Water Treatment Plant.

Q. But the purpose of your calculation

is to figure out what -- how much -- how much TCE was in the water when HP-651 was being pumped?

A. Yes, and HP 51 -- 651 was being pumped and said it was shut down on February 4th, but then, you know, it takes -- what you have in the reservoirs that is being provided to the rest of the system, it takes -- it takes a while to flush that through.

Q. Okay. Well, if we look at the number for building number 20 on January 31st, right, which is two -- two lines up, we know on January 31st HP-651 was, in fact, being used; right?

A. 651? Was being pumped, yes.

Q. Yes. Okay.

And so when on January 31st the number was 900 micrograms per liter; right?

A. Yes.

Q. So it's almost -- it's more than double than the number the day after HP-651 had been turned off; correct?

A. Yes, and you have a variability. You have some variation in the concentrations.

Q. Is there an explanation for that

variation the fact that HP-651 had been turned off the day before?

A. Well, it would have some effect, but you also have -- I have to go back to this to -- to go into details of where you want to go. You know, you also have dates 1/29/85 that were lower and -- well, you have a variability. Right? It's not one number. And I estimated a number that is representative --

Q. Okay.

A. -- for the long-term things and I did it the way I explain I did it, and that's what it is.

Q. Let me ask you this.

Would you agree that the February 5, 1985 sample from building 20 does not represent the concentration of TCE in the water being pumped from Hadnot Point while HP-651 is pumping?

A. Well, but it contains water that was pumped at HP-651 and that's what's contaminated.

Q. And it contains -- it also contains water when HP-651 was not being pumped; right?

A. Well, that depends how flush the system was. You have to look at the timing by the

hour and, you know, I don't recall the detail of that. But it is. You have the effect of 651. No question about it and --

Q. There's also no question that there would have been water in that sample, that 4/29 sample on February 5th, that was from wells other than HP-651 because HP-651 was not being pumped on February 5th; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, and, again, I will have to go to the hour. When was it stopped exactly and when -- how much time it takes to flush the system, and -- and I see what you -- what you are getting at.

It says you have slightly less concentration then, therefore, might have to be a little bit higher. It would not change it by much at all.

BY MS. BAUGHMAN:

Q. Okay. Let me ask you some more questions about this then.

Building 670. I think we talked

about this earlier. Building 670 is the Holcomb Boulevard Water Treatment Plant; right?

A. Yes, and that's the reservoirs in that -- in that system, yes.

Q. Okay. So there are five samples included in your calculation on Exhibit 5-3 that were from building 670.

Do you see that?

A. Yes.

Q. Okay. And the numbers of TCE at building 670, the Holcomb Boulevard Water Treatment Plant, the measurements for TCE were 8.2, 340, 27, 24, and 26; right?

A. Let me just get to find it.

Where did you get the 842?

Oh, yeah. Yes.

Q. Okay. And two of those samples were taken on January 29th and three of them were taken on January 31, 1985; right?

A. Yes.

Q. Okay. And I averaged those five and, you know, I could -- you could use a calculator on your phone or whatever, but probably sounds right.

If you have the 8.2, 340, 27, 24, 26, the average of that is 85 micrograms per liter. Okay? Take my word for that.

Let me ask you this question.

Do you believe 85 micrograms per liter is representative of the amount of TCE in Hadnot Point Water Treatment Plant water when 651 is running?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Well, the 651 was running during that time, right, and the systems were connected. So the water on average that was provided by the system included what was in the reservoirs at 670, and that's basically -- that's basically my understanding of the system.

BY MS. BAUGHMAN:

Q. Okay.

A. So all of this was representative of the system. So some places receive water with low concentration and some places with higher concentrations.

The purpose of what I did was to get an estimate, a long-time estimate as I said, of how much concentration of TCE the water supplied by Hadnot Point would contain when the effect of 651 is filled.

Q. Right. Okay.

So let me ask you this.

How -- during this time frame of January 27 to February 5, 1985, how were -- how did Hadnot Point water treatment -- Hadnot Point provide the water to Holcomb Boulevard? Like how did Hadnot Point actually get into the Holcomb Boulevard system?

A. Right. My understanding is that you have connection -- you have two connections. That's what I recall. And they open, at least one of them, and then it goes into the system. And the distribution system in my assumptions goes through the reservoir of 670 to kind of keep pushing that through.

Q. Okay. So you're saying, okay, the connection is in the piping in the water distribution system Hadnot -- between Hadnot Point and Holcomb Boulevard; right?

A. (Nods head).
Q. Okay. So -- so water in the Hadnot Point water distribution system gets into the Holcomb Boulevard water distribution system; correct?
A. (Nods head).
Q. Okay. Is there a way for water that's in the water distribution system of Holcomb Boulevard to get into the Holcomb Boulevard Water Treatment Plant?
A. It's not a treatment. It's a reservoir. It's not -- it's after the treatment plant. It's a reservoir.
Q. Okay. So how does water that's in the Holcomb Boulevard water distribution system end up in the reservoir?
A. Because everything is connected. That's my understanding.
Q. Are there not valves that prevent water in the water distribution system from backing up into the reservoir?
A. I do not know about the valve situation exactly there.
Q. Did you investigate that?

A. I did not investigate that. I made the assumptions that I made in my -- in my report.

Q. Does the Holcomb Boulevard Water Treatment Plant have a backflow prevention from the distribution system into the reservoir?

A. That I do not know.

Q. Do you know what a check valve is?

A. I do.

Q. What is it?

A. It's -- it's a valve that basically make -- forces a flow to go only in one direction. If it goes in the other one, it tends to shut down, if it's perfectly working.

Q. So were there check valves in the Holcomb Boulevard water distribution system to prevent water from the distribution system to back up into the reservoir?

A. I do not know. I assume that it was not the case. I assume that the waters that was delivered is the waters that is characterized by this data, and I made that calculation as I explained it. And if I am wrong, well, maybe then I would be corrected if I am shown wrong, but this is what I did.

Q. Just a minute.

Would it make sense that there would be check valves to prevent water from the Holcomb Boulevard water distribution system from backing up into the reservoir?

A. I don't know. I don't have an answer for that.

Q. Did you talk to anyone at the Holcomb Boulevard or Hadnot Point who works at those treatment plants or anyone from Camp Lejeune about whether there are check valves that prevent water from the Holcomb Boulevard distribution system from backing up into the reservoir?

A. I have not asked that question.

Q. Okay. If there were check valves to prevent water from the Holcomb Boulevard water distribution system from backing up into the reservoir, then your -- your numbers for building 670 should not have been used in this calculation.

Would you agree with me?

MS. O'LEARY: Object to foundation.

THE WITNESS: Well, we can -- we can argue about that. That

depends. Again, that depends on the setup on piping and -- and all of that and whether or not those reservoirs were still providing certain areas with water.

BY MS. BAUGHMAN:

Q. Well --

A. I don't -- I told you, I don't know if there was check valves or not, and I assumed that that was part of the system and that was concentrations that were in the system. That's what I assumed.

Q. You assumed that water from the Hadnot Point Water Treatment Plant, while 651 was pumping, would get into the Holcomb Boulevard distribution system and then would be able to back up into the reservoir for Holcomb Boulevard; right?

A. Again, I just assume that's part of the system. That's the data for the system. I just made a simple average of all of that to present to long term. Whether it's 582 or 600 or we can argue about that, but I clearly stated the way I did it.

Q. Let me ask you.

The sample that says building -- it's the third one -- building 670 "upstream of reservoir" in your Exhibit 5-3.

What does "upstream of reservoir" mean?

A. Well, it's upstream of the reservoir.

Q. So that's not a sample from the reservoir; right?

A. This is just how it was described, and I would interpret that as you say that it's upstream from the reservoir. That means it's as the water flows --

Q. That would be part --

A. -- it would be before the reservoir, but it could still be treated water. It could still be the water that is being provided.

Q. Well, the water that was being provided in that time frame of January 27 to February 5, 1985 was not coming from the Holcomb Boulevard reservoir; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Well --

BY MS. BAUGHMAN:

Q. Because Holcomb Boulevard Water Treatment Plant was shut down; right?

A. Well --

MS. O'LEARY: Same objection.

THE WITNESS: -- what was shut down was the treatment. Right? Because you had some contamination in the system, and that was shut down. You had a fuel leak, if I recall --

BY MS. BAUGHMAN:

Q. Right.

A. -- and that was shut down.

Q. Right.

Where was the fuel leak? Do you remember?

A. It was -- I believe it was on top of one reservoir. I don't remember the details of it.

Q. So building 670, the reservoir here that was sampled and included in your calculations, was that the reservoir that had the leak in it?

A. I do not know that.

Q. Okay.
A. It is a description of where exactly the sample was taken. It is not -- I could not figure out exactly the way it was.
MS. BAUGHMAN: Okay. I'm going to hand you what I've marked as Exhibit 42 to your deposition.
(Document marked for identification as Exhibit 42.)
BY MS. BAUGHMAN:
Q. And Exhibit 42 is a one-page document Bates-stamped CLJA_USMCGEN and the last four numbers are 6684.
Have you seen this document before?
A. Specifically that one single page here, I may have seen it. I don't know for sure.
Q. Okay. So you see this starts out at the top Sunday, January 27, 1985 at 1300, and it describes what happened there in terms of that gasoline leak.
A. Right.
Q. Right?
And about 25 percent down the page it says:

"Then the reservoir was drained of 1,000,000 gallons and hosed down with fire hose for several hours."

Do you see that?

A. Exactly.

Q. And that's referring to a reservoir at Holcomb Boulevard Water Treatment Plant; correct?

A. That's correct.

Q. Okay. And that's all on the entry for Sunday, January 27th; correct?

A. That's correct.

Q. Then it says:

"Monday - January 28th - the reservoir was refilled, at 1400," which would be 2:00 PM; correct?

And then it says "plant turned" -- oh, I'm sorry.

It says "the reservoir was refilled, at 1400 plant turned off."

Do you see that?

A. I see that.

Q. Okay. What water was used to refill that reservoir? Where did it come from?

A. Well, that may be the explanation of why you had contamination in that reservoir. It's just -- I don't know exactly where it came from. It may have come from -- partly from Hadnot Point Water Treatment Plant and partly from --

Q. But you don't know?

A. -- and partly from some wells.

I do not know --

Q. I mean --

A. -- but it was refilled with water and that water was not something that went through the plant.

Q. Well, how do you know that it wasn't refilled with water from Holcomb Boulevard?

A. Well, I don't know.

Q. You don't know either way?

A. Either way.

Q. Okay.

A. But the fact that it had some contamination in it, it may have been a blended matter because you need a million gallon of water to take it where you can.

Q. Well, let's talk about that for a minute.

If we don't -- if we set aside the upstream of reservoir sample because we don't know where that was taken; right?

The four other samples from building 670 Holcomb Boulevard reservoir are 8.2, 27, 24, and 26.

You see that?

A. I see that.

Q. They're very low; right?

A. Yeah.

Q. So we don't know how that reservoir was refilled; correct? What water was used to refill it; fair?

A. We don't know --

Q. Okay.

A. -- but it had some contamination in it.

Q. Yeah.

If the Holcomb Boulevard reservoir did not have check valves to prevent water from the Holcomb Boulevard distribution system from going into the reservoir, wouldn't the reservoir overflow?

A. You have overflow. You have

overflow vents or overflow structures in each reservoir. So they could overflow, but if you put more water than the reservoir contains, it would overflow. I mean, that's a logical thing. Right?

Q. Do you consider yourself an expert in the design of water treatment plants?

MS. O'LEARY: Object to form.

THE WITNESS: I am not an expert in the design of water treatment plant.

BY MS. BAUGHMAN:

Q. Okay.

A. But I have seen many of them and I have visited these.

Q. Okay. Isn't it normal for a water treatment plant to have a check valve to prevent the water in the distribution system from backing up into the reservoir?

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. Isn't that the ordinary way these things are designed?

MS. O'LEARY: Object to

foundation.

THE WITNESS: It can be the ordinary way, but specifically for those I do not know.

BY MS. BAUGHMAN:

Q. Okay. Let me ask you both times. Do you know whether it is standard practice to have a check valve in a water treatment plant to prevent water from the distribution system from backing up into the reservoir? Do you know?

A. I -- it would make sense to, but I do not know specifically for those if it was that way.

Q. You did not --

A. But it would make sense.

Q. It would make sense.

And you did not investigate whether there was a check valve preventing water from the Holcomb Boulevard distribution system from backing up into the reservoir.

You did not look into that; is that true?

A. I did not look into that.

Q. Okay. And just to be clear to make sure we're on the same page.

If you turn to page 5-33 of your report, in Opinion 7, you talk about the Holcomb Boulevard Water Treatment Plant. In the last sentence on this page, you talk about the connection between Hadnot Point and Holcomb Boulevard and you say:

"When this occurred" -- you're referring to when -- when there was high demand such that Holcomb Boulevard did not have sufficient water levels. You said:

"When this occurred, the Hadnot Point Water Treatment Plant provided supplemental water through a by-pass valve or a booster station that allowed Hadnot Point Water Treatment Plant water to supplement Holcomb Boulevard Water Treatment Plant."

Do you see that?

A. I see that, yes.

Q. Is it your opinion that during the time frame of January 27 to February 5, 1985, it was the by-pass valve or the booster station that allowed Hadnot Point to provide water to the

Holcomb Boulevard distribution system?

A. That was one of the connections. I don't recall exactly the name of it, but it was -- I think it was one of the connections that was open.

Q. Are there any other ways for Hadnot Point to provide water to Holcomb Boulevard, other than this by-pass valve or booster station?

A. I think there were two connections, and I don't remember the name of them.

Q. Okay. But they're part of the distribution system; right? The two distribution systems are connected?

Or there's a way to connect them with a valve?

A. Yeah, that's the connections between the two systems. Yeah.

Q. Okay. All right.

A. That's my understanding.

Q. All right. So I want to ask you a few questions about tank SLCH 4004. That's one of the numbers on Exhibit 5-3, the measurement of 318.

Do you know where that tank is

located?

A. Hold on. Hold on. You are losing me here. 5-3?

Q. Yes. It's page 5-27 of your report.

A. Oh, sorry. I thought it was a page. 5-3. Start to be a bit mixed up here. Okay.

Q. Okay.

A. Sorry for that.

Q. Okay. You're on -- you're on page 5-27 of your report; right?

A. Yes.

Q. Okay. So I just want to ask a few questions about the sample for tank SLCH 4004.

Do you see that?

A. Hold on. Hold on. Tank, tank, tank. S-2323?

Q. No. S -- it says SLCH 4004.

The bottom third of the page.

A. Oh, tank SLCH. Okay.

Q. Okay. So that has a measurement of 318 micrograms per liter.

Do you see that?

A. I see that.

Q. Okay. Do you know where that tank

is located?

A. I do not recall.

Q. Okay. So we looked it up and it's a Midway Park water tower.

And would you agree that the Midway Park water tower is furthest from the Hadnot Point Water Treatment Plant?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: I cannot answer that question just like this. I don't recollect.

BY MS. BAUGHMAN:

Q. Okay. Okay. Do you know whether there was contaminated water in the Midway Park water tower when Holcomb Boulevard Water Treatment Plant was shut down?

MS. O'LEARY: Object to form.

THE WITNESS: I don't know that. I don't know.

BY MS. BAUGHMAN:

Q. Do you know whether there was a mix of Hadnot Point and Holcomb Boulevard water in the Midway Park water tower when this sample was taken

on January 31st?

A. I don't recollect. I don't -- I don't know. I don't recollect. I mean, this is digging in the details that I don't recollect.

Q. Okay. Now, you'd agree that if we don't include, at a minimum, the samples from building 670, the Holcomb Boulevard Water Treatment Plant reservoir, that your number for the average amount of TCE in the water when HP-651 was running would be substantially higher?

MS. O'LEARY: Object to form.

THE WITNESS: I would agree with that.

BY MS. BAUGHMAN:

Q. Okay.

A. If it -- if you exclude those values that are lower than the rest, it will raise the average of. Yes, I agree with that.

Q. Okay. So in your report, you talk about performing a check on your calculations. This is on page 5-29.

Right after your -- the calculation of .39 times 582, you say that there was a check on the validity of the 220 some microgram per

liter average.

Do you see that?

A. I see that.

Q. Okay. And part of that included you used -- in that first sentence, you say that your check on the validity of the 220 some microgram per liter average TCE concentration can be made using ATSDR's assumption of 28 wells pumping. And then you cite Morris Maslia, ATSDR report from March 2013.

Do you see that?

A. I see that.

Q. Okay. So -- so when you're doing this check, you're assuming that 28 wells were pumping at the same time at the Hadnot Point Water Treatment Plant; right?

A. Yes. Yes. I borrowed the assumption that -- that ATSDR had done that. You have -- to satisfy the demand, you had an average of 28 wells pumping over the long period of time.

MS. BAUGHMAN: I'm handing you what I've marked as Exhibit 43 to your deposition.

(Document marked for

identification as Exhibit 43.)

BY MS. BAUGHMAN:

Q. Which is the report that you cite in Footnote 100; correct?

And that we'll -- we marked for the record. It's Chapter A: Summary of Findings -- Summary and Findings, and this is from Hadnot Point, Holcomb Boulevard, March 2013 and it is Exhibit 43. It starts at CLJA_WATERMODELING_ 01-0 000942579.

Actually, let me make sure. Let me see that.

A. (Hands document).

Q. Okay. Good.

All right. So I want to go to where you've referenced what you've referenced for the 28 wells pumping, which would be on page A14.

Wouldn't you agree that what Figure A6 on page A14 is showing is the number of operating wells, not the number of wells pumping at the same time?

MS. O'LEARY: Object to foundation.

THE WITNESS: Well, my

understanding is that my reading of that it was that those were are the ones that are being operated to satisfy the demand that you have on top of that was the figure.

BY MS. BAUGHMAN:

Q. So if you're looking Figure A5 that's on page A12, this shows the operational chronology.

This shows when wells were in operation; correct?

A. (Reviews document.)

Where does it say that?

Q. Well, the title is "Operational chronology"; right?

A. Yeah.

Q. And it's providing when it started and when it stopped?

A. Yeah, it says that. Yes.

Q. Right. Okay.

And then if you turn to page A11, at the very last text at page A11 says:

"An operational chronology for water-supply wells in the study area during the

period 1942-2008 is shown in Figure A5."

Right?

"This graph shows dates of operation for each well that supplied raw water to the water treatment plants and the dates when some of the wells were permanently taken out of service."

So you agree that's what -- that's what A5 means?

A. You lost me. I don't know where you are.

Q. Okay. Page A11.

A. Yeah.

Q. The very last set of text, like the last full sentence on that page. Last two sentences is referring to Figure A5.

And it says "An operational chronology" --

A. Hold on. I don't know where you are.

Q. Look at my. Look at my. You see this pink part here. That's where I'm reading from on page A11.

A. Okay. Okay.

Q. Okay?

A. Thank you.
Q. It says:
"An operational chronology for water-supply wells in the study area during the period 1942-2008 is shown in Figure A5."
Which we were just looking at; right?
A. Uh-huh.
Q. Okay. "This graph shows dates of operation for each well that supplied raw water to the water treatment plants and the dates when some of the wells were permanently taken out of service."
So you agree with me that that's what Figure A5 shows; right?
A. That's my understanding, yes.
Q. Okay. Then if you look at page A13 of this report, there is a sentence. And I'm going to I highlighted it here so you can see generally where on the page it is on A13. Okay? And it says:
"Based on documented and reconstructed information, an average of 28 wells supplied water each month to the Hadnot Point

Water Treatment Plant during the period 1942-2008."

You see that?

A. I see that.

Q. And then that refers to Figure A6, which is what you cited in your -- in your report; right?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Okay.

BY MS. BAUGHMAN:

Q. Okay. So that's an average of 28 supplied water each month.

That doesn't say that they were supplying them all at the same time, does it?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: What my reading of this was that to satisfy the demand -- for this Figure A6 -- to satisfy the demand that is on top of the figure, this is the wells that you had to operate, and -- and on average, you had to operate 28 wells on a monthly average basis

to -- to satisfy the demands.

That's what -- that's the way I read this.

BY MS. BAUGHMAN:

Q. Let me ask you about that.

I'm going to give you. Okay. I'm handing you what I've marked as Exhibit 44 to your deposition.

(Document marked for identification as Exhibit 44.)

THE WITNESS: Thank you.

BY MS. BAUGHMAN:

Q. And the Exhibit 44 I believe is also for the record it's Bates-stamped CLJA? WATERMODELING_07-0000019001 through 19004.

Now, I believe that this Exhibit 44 actually is in your report. Just have to figure out where. Here it is.

Okay. So in your report on page 4-18, it's Exhibit I-9 of your report.

This is -- this is information that you used to determine -- I'll wait till you get there.

Are you looking for your report?

A. What page are you?
Q. Page 4-18.
A. 4-18?
Q. Yeah.
A. Yes, I am there.
Q. Okay. So Exhibit 4-18 is a document that you used to determine the frequency of use of supply wells from November 18, '84 to February 4, '85.

You used this to determine that 39 percent pumping frequency for HP-651; correct?

MS. O'LEARY: Object to form.

THE WITNESS: Yes, that's the information that I found --

BY MS. BAUGHMAN:
Q. Okay.
A. -- for that well.
Q. Okay. Let me ask you.

If you look at this document, the last -- the last 8 wells like on I-9, those are -- those are wells that service Holcomb Boulevard; correct?
A. I don't recall that, but it's possible.

Q. Okay. Okay. So assuming that's true -- and I believe it is true -- that those are all serving Holcomb Boulevard, one could add up how many wells were operating on each day to figure out.

Based on what -- based on your assumption of 28, shouldn't there be 28 wells operating for Hadnot Point each day to make your assumption of 28 correct for your calculation?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: First of all, the assumption I made is the way I end up with it is what is written in the ATSDR report. Right?

BY MS. BAUGHMAN:

Q. Okay.

A. Now, this period of time here is a particular period of time. It's when you had incidents and -- and some wells were shut down and those kind of issues.

So this -- this was during basically the period where they were trying to figure out what the heck is going on and this, you know, some

wells were not being used because of that. So -- so data, and this is the data.

And I looked at that data, and this is 39 percent of the time 651 was down. I have no other data for the frequency of use of 651.

Q. Okay.

A. It could have been less. It could have been more.

Q. But you would agree that this period of time -- November 20, '84 to February 4, 1985 -- was not necessarily representative of how the wells were operated in the -- for the Hadnot Point water distribution system because they were making this investigation about contamination; right?

A. I --

MS. O'LEARY: Object to form and foundation.

BY MS. BAUGHMAN:

Q. Isn't that what you just said?

A. What I said is that during that period of time, some wells had been shut down. Right? So you had less wells available in that sense. And the 39 percent, if you had more wells, logically could have been less. Right?

Q. Well, isn't it also true in the seven months prior to your time frame of November 28, '84 to February 4, '85, there were six or seven wells that were new that had just come online?

MS. O'LEARY: Object to foundation.

THE WITNESS: There were some new ones that were -- that were available.

BY MS. BAUGHMAN:

Q. And they were being used. They were being pumped?

A. Well, that I would --

MS. O'LEARY: Objection. Foundation.

THE WITNESS: That I would have -- you have to show me where that is being said for those particular wells.

BY MS. BAUGHMAN:

Q. Okay. Would it surprise you that if you added up on your Exhibit I-9 the number of Hadnot Point wells that were operating from November 28 to February 4 that it was an average

of 13 per day?

MS. O'LEARY: Object to form and foundation.

BY MS. BAUGHMAN:

Q. Based on Exhibit I-9?

MS. O'LEARY: Same objections.

THE WITNESS: It could be, but it is also a period of time where less water was being used as well. You had some period of time historically where more water was because the base was more busy and so on.

BY MS. BAUGHMAN:

Q. So you're saying from November 28, 1984 to February 4, 1985, there was less water being used than normal?

A. Well, for just a single system. You have to go back to that figure you had where I say. It's Figure A15 I believe.

You know, again, I have to get through memory about those kind of things and if I -- I would like to see that Figure A15 again.

Q. A14. A14. I think you're looking --

MS. O'LEARY: A5?
THE WITNESS: Oh, was it A5. Yeah.
BY MS. BAUGHMAN:
Q. So we were looking at --
A. Yeah, yeah.
Q. It's page A12.
A. That's Figure A6. A6.
Q. Yeah, it's page A14. Okay.
A. A6. A6.
Q. So let me ask you the question again.
Are you -- I think you told me just a minute ago that the time frame of November 28, '84 to February 4, '85 was a time frame when there was less demand for water than normal.
Is that your testimony?
A. My testimony is that if you go to Figure A6, that shows basically total monthly flow in millions of gallons per day, right, for the Hadnot Point system. You can see that over some period of time it was close to 5 million gallon per day, and when you go down to the -- to the '85 percent of time, it was a lot more like 3. So

that's much you use less wells because of that.
Q. And -- and you'd pump less water from the wells?
A. No, I don't think so. I think you use less wells.
Q. Okay. So if the demand is lower, then that means the amount of water going through the treatment plant is lower; right?
A. Yes.
Q. Okay. So you'd need less water from the wells; right?
A. No. You need less wells.
Q. And less water?
A. You need less number of wells to use the water you need.
Q. Right, which is a lower amount of water than normal?
A. Not normal. That's the amount of water you need. So how many wells you need to provide that water because those wells, basically when you put them on, they produce what they produce.
Q. Okay. So in the earlier time frame, let's say from the 1940s all the way through

January 1970, there would be more wells being operated.

Is that what you're saying?

MS. O'LEARY: Object to form.

THE WITNESS: I would -- I would logically say yes, you need more wells during that period of time. Yes.

BY MS. BAUGHMAN:

Q. Okay. So when you're doing this check on the system, you assumed 28 wells pumping and 39 percent frequency of use for 651?

MS. O'LEARY: What page is that?

MS. BAUGHMAN: Page 529 at the bottom.

BY MS. BAUGHMAN:

Q. And you used a value of 16,297 in water pumped from Hadnot Point 651; right?

A. That's a reasonable calculation.

Q. Okay.

A. Right? That means you had high contamination in 651. That's what it says.

Q. Uh-huh.

A. And it's pretty close to what was

measured in 651.

Q. Right, but you're talking about a measured -- so the end of the sentence you say:

"Which is consistent with the measured TCE concentration of 18,900 micrograms per liter when supply well HP-651 was pumping in February 1985."

Correct?

A. Yeah.

Q. Okay.

A. That's why you have a measurement.

Q. But while you're doing this measurement in February '85, there weren't 28 wells pumping then. There was much less; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, and if you have less wells, that means the concentration would have been higher.

BY MS. BAUGHMAN:

Q. Right.

A. On the calculated concentration would have been higher and closer to the 19,000.

Q. But it wouldn't be correct -- the

calculations at the top of page 530, it wasn't correct to use 28 divided by .83 because there weren't 28 wells pumping in February 1985.

We know that based on your Exhibit I-9 where you can count the number of X's and determine in that time frame how many wells were pumping; right?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Yes, and, again, I am talking about long term here.

BY MS. BAUGHMAN:

Q. But this calculation wasn't done for long term. This is --

A. No, it is. The calculation compares just two things. It's what you would calculate making the assumption that I made. Right? It's 28 wells and the average concentration. That's what you would calculate. You get 16,000.

What was measured in a device 19,000. For me, this indicates that this well was heavily contaminated. I am not saying that it's an exact value. It was heavily contaminated and it's consistent with that.

Q. Okay. But your calculation is dividing by 28 wells --

A. Yes.

Q. -- for a number from February 1985 and there were not 28 wells --

A. Right.

Q. -- pumping in '85; correct?

A. Well, according to the information we have, there were less wells pumping then.

Q. Right.

A. But that will give you concentrations at a higher. That is consistent with this well 651 being the well that is heavily contaminated.

Q. I'm going to ask you some more questions about Exhibit I-9 in your report. So going back to page 4-18 of your report.

We agreed that this is the data that you used to determine -- to reach your result that Hadnot Point 651 pumped 39 percent of the time; correct?

A. Again, which page is that?

Q. 4-18.

A. Sorry. Okay.

That's the only data available that shows you by the people who are working there which wells were on, which wells were off --

Q. Okay.

A. -- during the period of time that is dated.

Q. Let me ask you about that then.

Who prepared the document that is your Exhibit I-9? Who -- who prepared it?

A. Well, basically it is a reproduction of what is in Exhibit 44.

Q. Right.

A. Which is handwritten and put into an Excel spreadsheet.

Q. Okay.

A. And I probably have one of my staff to do it.

Q. Okay. So let me -- let me ask a different question.

Who prepared Exhibit 44?

A. Somebody at the base.

Q. Who at the base?

A. I do not know.

Q. When was Exhibit 44 prepared?

And wait. For the record, I think you just said this, but just for the record, Exhibit 44 is the document that is the basis for your Exhibit I-9; correct?

A. Yes.

Q. Okay. When was Exhibit 44 prepared?

A. The exact date I don't know, but it would have been after, after the last date that you have on the -- on this, which is, you know, after January 6, 1985.

Q. Okay. But do you know if it was prepared in 1985 or years after that?

A. That I do not know. That's the only document we found that is an independent document, that is, doesn't have any -- anything that's done by, you know, either me or somebody else. It's -- that's the information that's out there in the file.

Q. Right.

But you don't know when it was prepared? You do not know when Exhibit 44 was prepared; correct?

A. Well, I do not know when exactly it was prepared, no.

Q. Okay. Do you know what the source of information was? In other words, whoever prepared Exhibit 44, what did they use to prepare this?

A. They use their knowledge of the system. That's what I understand.

Q. You understand based on what?

A. Because it was prepared for them when they were just trying to figure out the problem and -- and, you know, I don't know who did that, but it was not done by either ATSDR or myself or anybody else. It was done by people that worked at the plant, and this is basically something that you accept like you accept data sheets from the laboratories that are handwritten.

Q. How do you know it was -- how do you know Exhibit 44 was prepared by someone at the plant? Where does it say that?

A. Well, that's my deduction because it was part of the documents that were basically archived and -- and produced, and those documents were from the base. They were not from anybody else.

Q. So do you know whether Exhibit 44

was prepared based on other documents and data, or was it prepared as things were happening at the time? Like what was the source of the information used to prepare Exhibit 44?

MS. O'LEARY: Object to form.

THE WITNESS: My understanding is that the knowledge of the people at the plant and for some reason that was done.

BY MS. BAUGHMAN:

Q. You say that's your understanding. That's you're speculating, aren't you?

MS. O'LEARY: Object to form.

THE WITNESS: Well, I am taking that as information that's independent and that's available.

BY MS. BAUGHMAN:

Q. Okay. But you don't know who prepared Exhibit 44 and you don't know when it was prepared; right?

MS. O'LEARY: Object to form. Asked and answered.

THE WITNESS: I answered

that.

I do not know who prepared it, and I don't know exactly when it was prepared.

BY MS. BAUGHMAN:

Q. Okay. And you don't know how it was prepared. Based on some compilation of other information or data you don't know how this was prepared; fair?

MS. O'LEARY: Object to form.

THE WITNESS: Somebody at the water treatment plant put this together at some point. That's all I know.

BY MS. BAUGHMAN:

Q. But you don't know what they based it on?

MS. O'LEARY: Object to form.

THE WITNESS: I know they based it on their knowledge.

BY MS. BAUGHMAN:

Q. And that's your guess?

MS. O'LEARY: Object to form.

THE WITNESS: Obviously, I did not invent that. They based it on

their knowledge.

BY MS. BAUGHMAN:

Q. And you're basing that on what?

A. You don't generate a document like this in the archived material just dreaming of it. You base it on something which is knowledge, and that's my understanding and that's -- that's the only document that talks about how often the wells were cycled, and it is in the record that the wells were cycled. They were not always on. None of them were always on.

Q. Have you had any conversations with anyone who worked at any water -- at the Hadnot Point -- well, this is about the Hadnot Point Water Treatment Plant; right?

So have you had any conversations with anyone who worked at Hadnot Point Water Treatment Plant about Exhibit 44?

MS. O'LEARY: Object to form.

THE WITNESS: I don't recall exactly, but I think that I had asked. I mean, nobody knew anything about that. That's my understanding.

And the reason nobody knew

about that is because the people who are still there, or were still there in 2005 and later, weren't there when that was done. That's all I know, or at least none of them knew about who did that.

BY MS. BAUGHMAN:

Q. Okay. So -- so you actually took this Exhibit 44 to Hadnot Point and asked people who worked there about it?

A. No.

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Sorry.

I did not do that. I did not take this and show them who did this. I just -- I vaguely recall that I ask, you know, you have some information on when the wells were used or not and who knows about that, and there was nobody there who knew about it.

BY MS. BAUGHMAN:

Q. Okay.

A. Of the frequency of use of the wells.

Q. So you haven't asked anyone who worked at the water -- at the Hadnot Point Water Treatment Plant specifically about Exhibit 44; is that true?

A. I don't recall if I did or not, but nobody -- my recollection is that nobody knew anything about this.

MS. O'LEARY: Have we been going --

THE WITNESS: That are still there.

MS. O'LEARY: Sorry. We've been going a little over an hour. Can we take a just a short break?

MS. BAUGHMAN: Let me just finish up on a couple of things on this and then we can do that.

BY MS. BAUGHMAN:

Q. Okay. Can you tell me the name of anyone who you spoke to regarding Exhibit 44 and how it was prepared?

MS. O'LEARY: Object to foundation.

THE WITNESS: I cannot tell

you the name of anyone.

MS. BAUGHMAN: Okay. If you want, we can take a break. That's fine.

THE VIDEOGRAPHER: The time is 12:52 PM. We are now off the record.

(A recess was taken.)

THE VIDEOGRAPHER: The time is 1:06 PM. We are now on the record.

MS. BAUGHMAN: Thank you.

BY MS. BAUGHMAN:

Q. Okay. Dr. Hennet, I'm going to hand you what I've marked as Exhibits 45 and 46 to your deposition.

(Document marked for identification as Exhibit 45.)

(Document marked for identification as Exhibit 46.)

BY MS. BAUGHMAN:

Q. Exhibit 45 is CLJA_WATERMODELING_050001040308 through 319, and it starts "Questions for Mr. Mundt" dated August 5, 2008.

Exhibit 46 is CLJA_UST02-0004149161 through 9194.

Okay. There you go.

A. Thank you.

MS. BAUGHMAN: And let me give you. There you go.

BY MS. BAUGHMAN:

Q. Okay. So have you seen these documents before?

A. (Reviews document.)

Q. And I'll provide some context if it helps.

Exhibit 45 are questions sent by ATSDR to Mr. Mundt, who is a water treatment plant employee, and Exhibit 46 are the answers that were provided back.

So with that context, are these documents you've reviewed before?

A. I don't know. I don't recollect those documents.

Q. You don't recall them?

A. I don't recall them. I don't know if I ever saw them. I don't know.

Q. Okay. All right. So what I want to draw your attention to is, 45 just has the blank questions, right, that were sent. 46 are the answers that the ATSDR received back.

And if you go to page that's Bates-stamped the last three numbers are 165 of Exhibit 46. Question number 6.

A. Wait. Hold on. Can you repeat that? I was on the other exhibit.

Q. Yeah. It's Exhibit 46. The last three numbers are 165.

A. Okay.

Q. Okay. So question number 6. ATSDR asked:

"We found documents showing the daily pumping status for all Hadnot Point wells from November 28, 1984 to February 4, 1985."

And they reference a CLW number, which if you compare, matches Exhibit 44.

A. The first page of Exhibit 44 is?

Q. You look, you see the CLW number in the middle? Look where I'm pointing to.

A. Oh, I see that, yes.

Q. 6590?

A. Yeah. Yeah.

Q. And it's 6590. So they sent. They're asking about this document. Okay?

A. Uh-huh.

Q. So it says we found doc -- they're asking about Exhibit 44, which is in your report Exhibit I-9, and they say:

"We found documents showing the daily pumping status for all Hadnot Point wells from November 28, '84 to February 4, 1985."

And they give the CLW number of 6590 through 6593.

"Do any similar documents exist that might help us gain a better understanding of how wells were operated on a day-to-day basis historically?"

The answer is:

"We need more information. Where did the X's come from? If the information was taken off of the sheets and transferred to the CLW 6590, where are the original sheets the information came off? We do not know of any other documents that might exist."

Did I read that correctly?

A. You did.

Q. Okay. Do you know where the X's came from?

MS. O'LEARY: Object to

foundation.

THE WITNESS: Somebody at the base at the water treatment plant generated this document. I answered before. I don't know who and I don't know exactly when.

BY MS. BAUGHMAN:

Q. Or, well, they say: "Was it taken off the sheets?" And it says: "Where are the original sheets the information came off?"

Do you know the answer to that? Where are the original sheets that this information came from?

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. For Exhibit 44?

MS. O'LEARY: Object to foundation.

THE WITNESS: I haven't seen any sheets that -- and it appears that I am not the only one who haven't seen any.

BY MS. BAUGHMAN:

Q. Right. Okay.

So ATSDR asked people at the water treatment plant where this Exhibit 44 information came from, and they didn't know; right?

A. It appears to be.

Q. Yeah. But this isn't information that you had reviewed prior to signing off on your report in December of 2024; right?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: I say I don't recollect this. I don't know if I saw it in the past or not. I don't recollect this.

BY MS. BAUGHMAN:

Q. This isn't cited in your report, is it?

A. I would have to check, but I don't think so.

Q. Okay. What did you do to verify the accuracy of the data in your Exhibit I-9, Exhibit -- which is Exhibit 44?

A. Well, since I couldn't find anything else and it was not generated by either ATSDR, myself or other, you know, other people here, my

assumption was that's from the base personnel who did that and put it in the archives, and that I just did it based on their knowledge and that's all I could do.

Q. I'm going to object as nonresponsive.

Did you do anything to verify the accuracy of the data that is on your Exhibit I-9 in your report and that we've marked as Exhibit 44?

MS. O'LEARY: Object to form.

THE WITNESS: Well, this is basically a document, an original document in the files that has this information, and I considered that.

BY MS. BAUGHMAN:

Q. Did you do anything to verify the accuracy of Exhibit 44?

MS. O'LEARY: Object to form.

THE WITNESS: I could not do more than just take this document as being an original document, just like ATSDR did for many documents, including the data sheets or the laboratory reports

or the handwritten notes and all of that, I mean.

BY MS. BAUGHMAN:

Q. So you assumed it was accurate. You didn't do anything to verify?

MS. O'LEARY: Object to form.

THE WITNESS: I assumed that this is information and that is the only information that is found on the frequency of use of the wells.

BY MS. BAUGHMAN:

Q. Okay. I'm handing you what I've marked as Exhibit 47 to your deposition.

A. Thank you.

(Document marked for identification as Exhibit 47.)

BY MS. BAUGHMAN:

Q. Exhibit 47 is stamped CLJA_USMCGEN a bunch of 0s then 4794 through 4798 and it is a handwritten document as well.

Have you reviewed this document before?

A. (Reviews document.)

It kind of sounds familiar, but I

don't know for sure.

Q. Okay. If you look at page 3, you see that it says at the top "Wells that were on."

Do you see that?

And it lists dates January 28, '85; January 29; January 30; January 31st, all 1985. And then you go to the next page. February 1, '85; February 2, February 3, February 4th of '85.

Do you see that?

A. I see that.

Q. Okay. So the date range of the wells that were on is January 28, '85 to February 4, '85, similar to the time frame covered in Exhibit 44; correct?

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. At least it covers some of that time frame?

A. It covers some of that time frame.

Q. It covers most of the time frame when Holcomb Boulevard Water Treatment Plant was shut down; right?

A. According to the dates, yes.

Q. Okay. Did you compare as part of your work in this case the information on Exhibit 47 to Exhibit 44 to see if they match up?

A. I don't recall. That would be another source of information, but I don't recall if I did compare it or not.

Q. I mean, do you -- do you recall comparing any other data to Exhibit 44 to see if Exhibit 44 was accurate?

A. Well, again, I don't recall exactly what I did there, but I notice that on this, you know, sometimes you have more than 20 wells operating. Sometimes you have less. If that's what you're after.

Q. Okay. I'm going to object as nonresponsive.

I'm asking you: When you wrote your report in this case -- and I'm going back to Exhibit 44 -- did you compare it to any other data?

A. Well, I did not -- I do not recall having considered this or seen this. I may have seen it and in my report I relied on Exhibit 44. That's that.

Q. Is there any basis to rely on Exhibit 44 as opposed to Exhibit 47?

A. Well, probably not. It's -- let's say probably not. It's two different documents that should be look and if there are differences it gives you an appreciation of the uncertainty on the information. And, again, it's all for short period of time.

Exhibit 44 was for a longer period of time, and I guess that's -- that's -- that allowed me to do some percentage of well being used better than this one would have because this one is a much shorter period of time.

Q. Sure.

But if there are discrepancies between Exhibit 44 and Exhibit 47, that would tell you that there is some uncertainty or error potential in Exhibit 44; correct?

A. Yes, yes. And I am not sure, but I vaguely recollect that I may have looked for 651 if it was different or not, but, again, this is by memory. I don't remember.

Q. Okay. Well, you didn't write anything in your report about --

A. No.
Q. -- Exhibit 44, did you?
A. I don't -- I didn't do. I didn't do that, no.
Q. Okay. Would it surprise you that if I -- if you went through the exercise of comparing Exhibit 44 to Exhibit 47 that there are discrepancies for every day from January 28 to February 4 in terms of which wells were on and which wells were off?
MS. O'LEARY: Object to foundation.
BY MS. BAUGHMAN:
Q. At least one discrepancy per day?
MS. O'LEARY: Object to foundation.
THE WITNESS: I wouldn't be surprised if there are discrepancies but, you know, you have information. I would compare the 651 and those kind of things.
This is some things that I vaguely remember having seen, but I relied on the Exhibit 44 because it was longer period of time. That one has 69

days for information, and I understand that you have some and you have a lot of through the records that things that are not always consistent.

So you just, you know, you just clearly say what and state what you did, and I did that in my report. I did say exactly what I did. So you can read it.

BY MS. BAUGHMAN:

Q. Well, you didn't report to the court that there is uncertainty in the data, that you compared it to other data, and there were mismatches.

You didn't report that, did you?

MS. O'LEARY: Objection.

BY MS. BAUGHMAN:

Q. You did not include that in your report?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Specifically on this one, I don't think I did that in my report.

BY MS. BAUGHMAN:

Q. Right.

So you're saying you think you were aware of Exhibit 47. You compared it. You know that there were discrepancies, and you did not inform the court of that?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: I didn't say that.

I say that this vaguely resembles some things that I may have seen, but I relied on this one because it had the most longest period of time.

Because what I was interested in was what was the frequency of use of well 651, and you don't get that from this. You get that from that.

BY MS. BAUGHMAN:

Q. But if you compare the two and you see that there are discrepancies, that tells you that there is an error rate in your data; right?

MS. O'LEARY: Object to form. Already asked and answered.

THE WITNESS: I do not know there are discrepancies on 651. I don't recall that.

BY MS. BAUGHMAN:

Q. Since Exhibit 44 does not indicate what the source is of the data, there's no way it can be verified; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Please can you repeat the question.

BY MS. BAUGHMAN:

Q. Since Exhibit 44 does not list the source of the data for the X's on the document, there's no way you can determine if it's accurate --

MS. O'LEARY: Object to form.

BY MS. BAUGHMAN:

Q. -- or verify the accuracy?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: That's specific of the nature of the information available.

BY MS. BAUGHMAN:

Q. So HP-651 was put in service in July of '72; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: That's my recollection.

BY MS. BAUGHMAN:

Q. Yeah. That's what it says in your report; correct?

A. Show me where --

Q. Sure.

A. -- but that's my recollection.

Q. Yeah. I'm happy to show you where. Let's see here.

A. (Reviews document.)

Q. Page 5-22. 5-22 at the bottom of the page you have opinions for Hadnot Point.

A. Yes.

Q. Okay. And your first sentence under Opinion 5 says:

"Supply wells HP-651 only supplied water to the Hadnot Point Water Treatment Plant from July 1972 until February 5, 1985."

Correct?

A. That's my understanding, yes.

Q. Okay. That's your understanding.

So if you add up the number of months then that HP-651 was operating, that would be -- it's 12 and a half years. So that would be 153 months.

Does that sound right?

A. I take your word for it.

Q. Okay. And what you've done is you've used two months of data that is on your Exhibit I-9, our Exhibit 44, and you've represented that that is a surrogate for the other 151 months that 651 was operating; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: That's the only information that I found.

BY MS. BAUGHMAN:

Q. But I've accurately represented what you did; correct?

MS. O'LEARY: Object to foundation.

THE WITNESS: That's what I

did, and based on that information, you get 39 percent frequency of use for that particular well.

BY MS. BAUGHMAN:

Q. Right.

A. That's the only information for the frequency of use for that wells that I could find.

Q. Okay. And just -- just to be sure, just to restate it to make sure we're on the same page.

You took two months of data from the end of November of '84 until the beginning of February of '85. You calculated that HP-651 is operating 39 percent of the time, and from that you've assumed that it was always operating at 39 percent of the time for the entirety of the 153 months that it was in operation.

Correct?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Yes, and it is consistent with the fact that the wells were cycled by -- by design and it is consistent.

BY MS. BAUGHMAN:

Q. So the wells were cycled by design on and off; right?

A. Right.

Q. That was to avoid driving low quality water into the water distribution system; right?

A. Yes, that was by design --

Q. Okay.

A. -- and they were cycled on the other well in more than 30 of them and they were cycling them.

Q. So in terms of the cycling, was it typical for the cycling to be consistent each month, or was the cycling such that in some months some wells would be used more and in some months some wells would be used less?

A. We only have data for basically two and a half months or a little bit more than two months. So, you know, you cannot -- I agree that you cannot generalize, but that's the only information we have.

Q. Did you ask --

A. We know that it was not 100 percent

and we know that it was not zero percent. So you have some information that suppose 39 percent. So what else can I use?

Q. Okay. Did you ask -- did you talk to anyone at the water treatment plant about what the normal operation was in terms of cycling of the wells at Hadnot Point?

A. I did and they said they cycle them, and the thing is historically I don't know exactly how they did it, but right now everything is automated. So they can stop them, you know, not manually, but at the time they were just starting the wells manually.

Q. Okay.

A. Just go and prepare them and it's on, and then the next week somebody tells you shut down this one, open that one for some reasons, and that's the way it was done.

Q. Isn't it true that the ATSDR had data on the cycling of the wells for a period of 10 years from 1998 to 2008?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, but I use

that as completely not representative from what happened before the problems were discovered.

BY MS. BAUGHMAN:

Q. And what -- for what reason?

A. Just -- just because it was a different setting, different setting after, you know, for that period of time for which you know which wells were on and off, and -- and that includes the well for which they have data. It includes none of the ones that are -- that were contaminated, and the only information that is -- that is available for that frequency of use is what I just mentioned. It's -- it's Exhibit 44.

Q. Well, did you have available to you the 10 years of -- of pumping data from 1998 to 2008?

A. Yes, but in my opinion that, you know, extrapolating that all the way to 1950 is -- is just kind of a -- it's one way to do it, but that doesn't mean it's right at all.

Q. Did you compare your methodology from Exhibit 44 to the 10 years of data from 1998

to 2008 to see whether your methodology was valid?
MS. O'LEARY: Object to form and foundation.
THE WITNESS: At least the data I considered is within the period that contamination was there.
BY MS. BAUGHMAN:
Q. Object as nonresponsive.
As a check on your methodology, did you compare the data that you had in Exhibit 44 to the 10 years of data from '98 to 2008?
MS. O'LEARY: Object to form and foundation.
THE WITNESS: I didn't do that because I don't think it's representative to make such a comparison.
BY MS. BAUGHMAN:
Q. There are some wells that were operating during the time frame of Exhibit 44 that were also operating from '98 to 2008; right?
A. Yes.
Q. So you could look at that to see whether -- how often were those wells used in Exhibit 44, how often were they used in '98 to

2008 to see whether it matched up?
A. I didn't do that.
Q. You did not?
A. I did not.
Q. Okay. Do you know whether the data from '98 to 2008 indicates that the cycling occurred more in the period of months as opposed to days? In other words, certain -- some wells weren't used for a given month and then they were used more in the next month, or was it more in cycling in a matter a daily operation?
MS. O'LEARY: Object to form.
BY MS. BAUGHMAN:
Q. Did you look at that to see?
MS. O'LEARY: Object to form.
THE WITNESS: My understanding is, I did not consider that because my understanding of it is everything changed.
BY MS. BAUGHMAN:
Q. Why did everything change?
A. Because they just modernized and they just basically learn much more about the system after the problems were discovered, and

they modernized and they had new wells and they had all kind of new information and said do not operate like they did in 1950.

Q. Okay.

A. That's my understanding.

Q. And who did you rely on for that information?

A. Well, for -- well, several things, but one thing I recall I just -- when I was talking to the people at the water treatment plant, I just said, you know, things have changed and they, oh, everything is much modern now. We have scatter system, we have this, we have that, and they have learned a lot and they've modernized and that's expected.

Q. That conversation occurred in when? 2025?

A. Probably before in some of my visits. That would have been during my visits.

Q. So when was the conversation about the modernization that you just talked about? When did you have that conversation?

A. It was -- it was previous visit because that was the first time that they were

just showing me the way the scatter system and so on and it was not the last visit. It was before.

Q. For this case or for another case?

A. I do not recollect that.

Q. Okay. Who did you speak to?

A. The people at the water treatment plant.

Q. The name. I want the name.

A. I did not ask name because everybody -- that was basically the rule of the game is you can talk to people, but you don't ask name and take notes of names.

Q. Okay. When did -- the person who told you this information about modernization, when -- what was the years that that person worked at the water treatment plant?

A. Probably quite recent because nobody there was there in the '80s that I understand.

Q. Were they there from '98 to 2008?

A. Possibly.

Q. Did you ask?

A. I didn't -- I don't recall.

Q. Okay. Is it your opinion that December 1984 represents a typical month for the

Hadnot Point water distribution system in terms of from the 1950s up until 1983?

MS. O'LEARY: Object to form.

THE WITNESS: Can you repeat please?

BY MS. BAUGHMAN:

Q. Yeah. Does December 1984 represent a typical month for the Hadnot Point Water Treatment Plant's operation and well cycling as compared to the three decades prior?

MS. O'LEARY: Object to form.

THE WITNESS: In 1984, there the problem was being investigated. The problem was there and there were wells that were shut down. They were trying to understand what was going on.

So it is what it is and we have the information we have for that period of time and, you know, what -- what we know for the -- from the 1950s to the present is -- is not that well-documented as far as exactly what they were doing.

But the big picture is

documented. There were cycling wells, and when the wells would just produce less, they would just stop them and maintain them and so on and that's the type of an operations that -- excuse me -- that is consistent with what you do when you have a field of producing wells.

BY MS. BAUGHMAN:

Q. Okay. I'm going to object as nonresponsive.

December 1984 was not a typical month for Hadnot Point Water Treatment Plant operation because they were investigating the contamination at that time; right?

MS. O'LEARY: Object to form.

THE WITNESS: In that sense it was, but they still had to produce water to supply water.

BY MS. BAUGHMAN:

Q. Okay. And you'd agree with me that new wells that seven new wells -- 611, 614, 621, 627 and 639 -- those are all new wells that had come online less than seven months prior to December of '84; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: I would have to double-check that. I don't recall the numbers anymore of the wells.

BY MS. BAUGHMAN:

Q. Okay. Would it surprise you that those seven new wells -- 611, 614, 621, 627, and 639 -- had the capacity to supply half of the water needed for the Hadnot Point Water Treatment Plant?

MS. O'LEARY: Object to foundation.

THE WITNESS: Again, I will have to check and capacity doesn't mean what they can produce.

BY MS. BAUGHMAN:

Q. Right.

A. It's the capacity.

Q. Did you evaluate, did you perform the exercise of looking at Exhibit 44, your Exhibit I-9 in your report, to see how often the those seven new wells were used in that two-month time frame?

MS. O'LEARY: Object to foundation.

THE WITNESS: I did not evaluate that and -- and if the capacity was higher, maybe they were -- the schedule of cycling was different.

BY MS. BAUGHMAN:

Q. As compared to in the years prior when --

A. Yes.

Q. -- those wells weren't there; right?

A. Yeah.

Q. Okay. Okay. I'm going to ask -- I want to ask you about a different subject matter.

If you could turn to your Opinion number 11, I'll try to -- that is -- hold on.

So your Opinion number 11 on page 5-37. You're critical there of ATSDR for not including available site-specific data; right?

In fact, if you turn to 5-38, in your in summary part of 5-38, you say -- you reference parameters that are inconsistent with site-specific data.

Is there any site-specific data that

you claim ATSDR did not consider other than the FOC, or fraction organic carbon data?

A. Well, that's the one that really matters. In addition to the errors I did for the Tarawa Terrace model, but that's the one that is important for -- for evaluating the timing of transport of the contaminants.

Q. Okay. FOC is part of calculating the retardation factor; right?

A. It's part of --

Q. Okay.

A. -- of that calculation.

Q. All right. But just before we talk about FOC, I just want to know.

Is there any other site-specific data that you claim ATSDR -- that was available to ATSDR but ATSDR did not consider in the modeling?

Is there anything else other than the FOC data?

A. Well, you know, the bulk density is not representative of the site. So that's another one. And -- and --

Q. I'm sorry. Was there -- wait. Wait.

Was there bulk density data or are you talking about a factor?

I'm talking about site-specific data.

MS. O'LEARY: Object to form.

THE WITNESS: Yeah. No, that will not be site-specific data.

BY MS. BAUGHMAN:

Q. Okay.

A. It's just errors that I did.

Q. Okay. So I'm not talking about errors here. So let me try to rephrase it and see if we're on the same page.

I'm talking about site-specific data that you claim existed but ATSDR didn't use for the modeling.

You've identified the FOC data.

Is there any other site-specific data that you claim ATSDR did not use?

A. That as far as geochemistry is concerned, that's the one, that's the one I flagged, and I don't have another one.

Q. You don't. Okay.

So I want to talk about the FOC

data.

You -- if we look at page 5-17 of your report, you list the site-specific FOC data there; correct?

A. Let me see. 5-17? Yes.

Q. Okay. First question I have for you is: These data vary very widely, right, by a factor of at least 3 orders of magnitude?

A. This type of data does that, yes.

Q. Okay. So 3 orders of magnitude means like by a factor of at least a thousand?

A. Yeah, in some areas, you have more fraction organic carbon than some other areas, yes.

Q. Okay.

MS. O'LEARY: I'm sorry. Object to foundation on the last question.

BY MS. BAUGHMAN:

Q. Which of the data that are listed on your Exhibit 3-2 on page 5-17 of your report, which of those samples are from Tarawa Terrace as opposed to Hadnot Point?

A. Well, all of the samples I believe

are in the Hadnot Point area, but as far as the hydrogeology are concerned, we are talking about the same type of materials beneath both. You don't have a stop just because you are changing addresses.

Q. Okay. Just to be clear, all of the FOC data that existed that you say ATSDR should have used, all of them is from Hadnot Point. None of it is from Tarawa Terrace; right?

MS. O'LEARY: Object to form. Asked and answered.

THE WITNESS: I believe so because that's -- that's why it was measured, and it is measured in the materials for which groundwater moves.

BY MS. BAUGHMAN:

Q. Do you have any --

A. For both -- for both Tarawa Terrace and Hadnot Point areas.

Q. Okay. Do you have any FOC data from Tarawa Terrace such that you can say that the numbers are the same in Tarawa Terrace and Hadnot Point?

A. Its geological materials are the

same. Therefore, there is we have the data we have and it will be in the same range. As a geologist, I can tell you that.

Q. Do you agree that fraction organic carbon should not be used to estimate Kd if the organic carbon content is less than .001?

A. Well, this is kind of -- it is when the relationship starts to -- to not be that good anymore. But it is in every -- in every type of groundwater like this, you will have a wide range, and typically what is being done is because the groundwater is encountering all those materials, you typically take median value or geometric mean value or average value to represent those materials. And in some sense, that's what -- that's what, you know, even ATSDR had to do.

Q. You're aware that the EPA and that other authors have published that you should not use fraction organic carbon to estimate Kd if the organic carbon content is less than .001; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: It is -- it is not stated exactly like that.

It is when the relationship falls, starts not to be a linear relationship in some sense, and it is recommended that, you know, if you -- if you start to go really low like that, it's -- it's not -- it becomes highly uncertain.

BY MS. BAUGHMAN:

Q. Okay. So, and going back to your Opinion 11, you say at the top of page 5-38 that:

"ATSDR's use of a low Kd value had the effect of accelerating arrival of contaminants at the supply wells."

Okay. So my question is: Have you conducted a sensitivity analysis for your opinion that the retardation factor used by ATSDR had the effect of accelerating the arrival time?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Well, essentially what we are doing is the Tarawa Terrace model because they didn't make the same mistakes or assumptions and incorrect assumptions in the -- in the

Hadnot Point one. They were more reasonable there.

BY MS. BAUGHMAN:

Q. Okay. I'm just asking: Did you conduct a sensitivity analysis to see what the effect would be about using a different retardation factor?

A. Well --

MS. O'LEARY: Object to form and foundation.

THE WITNESS: The sensitivity analysis is that if you -- if you have higher values for the retardation factor, it will go slower, and if you have lower values for the retardation factor, it will go faster.

BY MS. BAUGHMAN:

Q. I'll object as nonresponsive.

Did you run the model with different retardation factors to see what the effect would be?

A. I did -- I didn't -- I did a calculation that I present in my report, which are basically the simplest type of calculations that

follow the -- the laws of hydrogeology, if you wish, to estimate transport. And this is the results are basically reasonable and that gives you a ballpark.

Q. Okay.

A. I mean, I'm not saying that it is -- that it is the totals or anything else. It's something that tells you this is the way it looks like.

Q. Objection.

A. And then -- and then you can go into complexity to hide the fact that you don't have information, but what you should never do is ignore the site-specific data. That's basically my point.

Q. Objection. Nonresponsive.

Okay. I'm at --

THE VIDEOGRAPHER: Time.

MS. BAUGHMAN: Yeah. Thank you. I know.

BY MS. BAUGHMAN:

Q. Did you go to the ATSDR model, not your calculations but the ATSDR model, change the retardation factor using the different FOC numbers

for Tarawa Terrace to see what effect that would have? Did you do that?

A. I believe Dr. Spiliotopoulos did that.

Q. Okay.

A. I don't. I didn't do that on the model. I just --

Q. All right.

A. -- I looked at -- looked at the calculation based on the evaluation, the data, and the parameters that are reasonable to make my estimate presented in my report.

Q. Let's talk about that. Let's go to -- I want to talk about your travel time calculation for Tarawa Terrace on page 5-15 and 5-16 of your report.

And you calculated travel times for PCE to reach TT-26 --

A. Hold on. Hold on.

Q. You're going to know this without looking.

You calculated travel times for PCE to reach Tarawa Terrace 26 from ABC One-Hour Cleaners from three representative flow paths;

right?

MS. O'LEARY: Object to form.

THE WITNESS: Yes.

BY MS. BAUGHMAN:

Q. Okay. Did you select a flow path that was meant to be representative of a path line that leads to the first detection or first arrival of PCE at TT-26?

MS. O'LEARY: Object to form.

THE WITNESS: I just looked at the representative pathways for the situation with all of the simplification and uncertainty that are included in -- in this. I used the ATSDR hydrological environment, which is oversimplified to start off with.

So all of this -- all of this tells you that if you do it in a simple manner, which it should be done first, you just get the range and that is the range.

The fastest pathways that I made a calculation for is if the contamination travels in layer 1 for most

of the distance to the well.

Remember that the well opening is in layer 3. So which ever way you go, at some point you have to go down there. And the pathways that I have are representative. It's a ballpark.

BY MS. BAUGHMAN:

Q. Okay. I'm going to object as nonresponsive.

Would you agree that your analysis regarding Tarawa Terrace and the travel time is not meant to determine when PCE would first arrive at TT-26? You did not do that calculation, did you?

MS. O'LEARY: Object to form.

THE WITNESS: No. The calculation is when -- when basically the contamination arrives, and you can have a molecule that arrive faster than I calculated and -- but what I am looking at is when does a substantial amount of contamination would have arrived at the well making a simple, a simple set of calculations that can be reproduced that

do not have errors or incorrect statement in, and that's what I did and that gives you a ballpark.

BY MS. BAUGHMAN:

Q. Okay. Have you reached an opinion or have you reached a conclusion within reasonable scientific certainty as to when TT-26 was first contaminated with PCE?

MS. O'LEARY: Object to form.

THE WITNESS: I did what I did, and it's expressed in my report.

BY MS. BAUGHMAN:

Q. You're aware that there is -- there are textbooks and peer-reviewed literature about how to calculate the breakthrough when contamination first arrives at a well; right? You're familiar with that?

A. Yes.

MS. O'LEARY: Object to foundation.

BY MS. BAUGHMAN:

Q. That's not what you did?

MS. O'LEARY: Sorry. Please slow down. Object to foundation.

BY MS. BAUGHMAN:

Q. You did not do a breakthrough analysis, did you?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: I did a travel time analysis along three representative pathways. That's what I did.

BY MS. BAUGHMAN:

Q. You did not do a breakthrough analysis to determine when contamination would first occur at TT-26; correct?

MS. O'LEARY: Object to form and foundation.

THE WITNESS: As I said before, you can have a molecule arriving faster, but it is not what I did.

I said the typical travel time with all the uncertainty you have, and I recognize that, is basically the ballpark is as I estimated it in my report. And you have aspects of it that some of it can go faster, but you also have some of it can go slower.

BY MS. BAUGHMAN:

Q. Right. But --

A. And you have that.

Q. -- you agree with me. You understand the concept of breakthrough?

A. Yeah.

Q. Right.

And you agree with me that that's documented in textbooks that you would consider to be reliable on groundwater flow and transport; right?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, you do.

BY MS. BAUGHMAN:

Q. There's -- there's a methodology to use to determine the breakthrough of a contaminant at a well; correct?

MS. O'LEARY: Object to foundation.

THE WITNESS: Yes, but we are talking about something different here.

I'm saying when -- when would you have expected contamination, you

know, substantial contamination to arrive at the well.

BY MS. BAUGHMAN:

Q. Okay.

A. I am not talking about a molecule.

Q. You didn't do the breakthrough analysis; right?

A. I -- I --

MS. O'LEARY: Object to form and foundation.

THE WITNESS: Sorry.

I did not do a breakthrough analysis.

BY MS. BAUGHMAN:

Q. Okay. And what do you define as substantial contamination at TT-26? What does that mean?

A. It's when --

MS. O'LEARY: Object to foundation.

THE WITNESS: Yeah.

It is when going from some of the pathways, the contamination is expected to arrive basically in a

substantial manner.

BY MS. BAUGHMAN:

Q. Is there a number for substantial like -- like a certain microgram per liter that defines substantial contamination for you?

A. I did not try to evaluate concentrations. I evaluate time because I think that's more important.

Q. Okay. But you said you were calculating the time for substantial contamination.

What do you define as substantial contamination?

A. Something that --

MS. O'LEARY: Object to foundation.

THE WITNESS: Sorry.

Something that would be measurable at the time, and I don't have a number. I did not do a breakthrough concentration arrival at the well.

I just made how much time would it take for the concentration of the PCE on average along those three

different type of pathways to arrive at the well and that's what -- that's the simple things that I did. And this is a reasonable first step that should always be done to give you a ballpark of what is reasonable. And --

MS. BAUGHMAN: I'm going to object to the nonresponsive portion, and I will pass the witness.

MS. O'LEARY: Okay. If we can just take a few minutes break. Thank you.

MS. BAUGHMAN: I assume you won't be talking to your witness during the break?

MS. O'LEARY: I might be asking him about certain things, but that's appropriate.

MS. BAUGHMAN: That's not appropriate.

MS. O'LEARY: We can fight about that later.

THE VIDEOGRAPHER: Time is 1:50 PM. We are now off the record.

(A recess was taken.)

THE VIDEOGRAPHER: The time is 1:57 PM. We are now on the record.

MS. O'LEARY: Thank you.

EXAMINATION

BY MS. O'LEARY:

Q. And, Dr. Hennet, I have just a very few questions.

Near the end of Ms. Baughman's questions, she had several for you about the flow paths you used to calculate travel time of PCE to well TT-26.

Do you recall that?

And I have some -- I want to ask you about a few things in your report related to that.

So if you could go to your report, which is Exhibit 31, on page 5-15.

A. Yes.

Q. All right. In the last paragraph, the second sentence it says:

"The representative flow paths considered to represent PCE transport in groundwater are illustrated in Exhibit 3-1. The site-specific data for FOC is summarized in

Exhibit 3-2. Supporting materials for the calculated travel times are provided in Attachment D."

Did I read that correctly?

A. Yes.

Q. And so if I -- if you could turn to Attachment D from your report to page D-7 and to D-8.

A. Yes.

Q. Are you there?

Are the graphs shown on D-7 and D-8 part of the supporting materials to your opinion on the arrival time of PCE at TT-26?

MS. BAUGHMAN: Objection. Leading. Form.

THE WITNESS: Yes, this is -- this is basically what I relied upon to -- to support my calculation.

BY MS. O'LEARY:

Q. And how do these, the figures shown on D-7 and D-8, relate to your representative flow paths?

A. This is -- what this provides you is basically on the different layers the gradient of

groundwater flow.

Q. Oh. Are you looking at D-5 and D-6 or D-7 and D-8?

A. Well, okay. That is on both what I just said.

But can you repeat the question? Because I think I missed the first question you asked.

Q. Yeah. So the figures shown -- well, let's back up.

The figures shown on D-7 and D-8 that are labeled Figure F21 and Figure F25, F20 and F24, do you see those figure labels?

A. Yes.

Q. Where does -- like where do these figures come from?

A. They come from the ATSDR work.

Q. Okay. And there's what looks to me like a plume shown on these figures; is that correct?

A. Yes.

Q. Okay. And why did you include figures showing the plume in Attachment D?

A. That's to show where ATSDR estimated

the concentration was in the groundwater environment in the -- in the different layers. I mean, in layer 1, 4-47 and in layer 3, 48.

Q. And why did you include these figures showing ATSDR's prediction of the plume in your report?

A. Well, it's -- it's because ATSDR calculation and estimate shows that the concentration or the contaminant, the contaminant, the COCs are basically traveling into those layers and they depicted the results here as plumes.

Q. Okay.

A. And that -- that shows you that you have transport in layer 1 and you have transport in layer 3.

MS. O'LEARY: Okay. I don't have any other questions. Thank you.

MS. BAUGHMAN: Great. Hold on one second. Let me just double-check.

Yeah, we're done.

THE VIDEOGRAPHER: This concludes for today's deposition. The date is June 4, 2025. The time is 2:02 PM. We are now off the record.

(Signature not waived, the deposition concluded at 2:02 PM.)

* * *

ERRATA SHEET

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

Page No._____Line No._____Change to:_____

_____

DECLARATION UNDER PENALTY OF PERJURY

I declare under penalty of perjury that I have read the entire transcript of my Deposition taken in the captioned matter or the same has been read to me, and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the DEPOSITION ERRATA SHEET hereof, with the understanding that I offer these changes as if still under oath.

Signed on the _____ day of _____, 2025.

_____

REMY J.-C. HENNET, PhD

CERTIFICATE OF REPORTER

DISTRICT OF COLUMBIA )

I, Denise Dobner Vickery, a Registered Court Reporter and Notary Public of the District of Columbia, do hereby certify that the witness was first duly sworn by me.

I do further certify that the foregoing is a verbatim transcript of the testimony as taken stenographically by me at the time, place and on the date herein set forth, to the best of my ability.

I do further certify that I am neither a relative nor employee nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such counsel, and that I am not financially interested in the outcome of this action.

Denise D. Vickery

DENISE DOBNER VICKERY, CRR,RMR
Notary Public in and for the
District of Columbia

My Commission expires: March 14, 2028

459:6,6 462:5
467:4 471:7
472:1 473:7,15
473:19,24
483:3 494:1
514:10
**bash** 294:5
**basically**
305:22 308:7
314:12 315:14
319:10 326:5
334:15 338:3
369:4,16
377:16 380:5
382:14 384:7
388:15 389:1
391:9 393:15
394:10 400:4
401:14 410:5
410:14 432:17
432:17 435:10
459:22 463:19
464:20 469:10
471:13,20
483:13 495:18
499:23 501:10
512:24 513:3
513:14 516:17
518:20 520:24
524:17,24
526:10
**basin** 365:3,5
365:10,13,17
366:6,16 368:9
370:5 371:20
372:17,24
**basing** 474:3
**basis** 374:23
393:23 397:14
400:14 409:16
456:24 470:3
480:11 487:1
**bates** 310:17
314:22 343:7
360:1 381:13
440:12 457:14
479:2
**baughman**
293:5 296:3
301:16 302:1,1
302:15,20
303:23 304:7
305:2,5,6,16
306:24 307:4
307:11 310:1,9
310:14 311:11
312:6 314:16
314:21 317:8
317:13,24
318:1 329:8
330:15 331:12
331:18 332:1
332:17 333:8
333:20 334:7
334:23 335:6
336:11 337:4
338:7,24
339:15,24
342:11,17
343:1 344:7,17
345:8 346:17
347:16,21
348:16 349:4
350:20 351:9
352:1,8,11,20
353:7,23
354:11,16
355:1,9,21
356:14 358:10
360:22 362:19
363:24 364:7,9
370:18 371:9
371:24 374:24
375:10,20
377:1 379:15
380:9,20
381:22 382:6
383:10,22
384:17,24
386:9 389:16
389:22 390:11
390:23 391:18
391:24 393:16
394:3,20 395:3
396:2,9,12
398:4 399:1,18
400:6,21 405:1
405:12 406:3
406:12 408:5
410:7 411:7
413:16,24
415:5 419:5
430:21 432:19
437:5 439:1,11
440:5,10
444:11,21
445:5 449:13
449:21 450:14
451:21 452:2
453:6 456:11
457:4,12
458:15 459:16
460:18 461:11
461:20 462:4
462:13 463:4
465:8,14,16
466:20 467:12
472:10,18
473:5,14,20
474:2 475:6,21
476:15,18
477:2,9,10,18
478:2,4 481:7
481:16,23
482:14 483:16
484:3,11,17
485:17 488:13
489:10,17
490:1,19 491:4
491:12,18
492:1,8 493:19
494:4 495:1
497:4 498:7,17
499:13,20
502:6 503:8,19
504:6,17 505:7

**i**

| | | | |
|---|---|---|---|
| 316:2,13,21 | 355:22 356:5 | 394:21 395:4 | 433:21,21 |
| 317:4,8,8 | 356:18 357:5,8 | 395:19 397:2,5 | 434:2,7,14 |
| 318:9 319:12 | 357:14,18,23 | 397:5,12,12 | 436:15 440:1,5 |
| 319:18 320:6 | 358:13,17,24 | 400:11 401:5,6 | 440:17 441:10 |
| 320:14,18 | 359:7,10,15,22 | 401:6,16,19 | 441:23 442:18 |
| 321:13,18 | 360:6 361:9,14 | 403:2,7,15,17 | 443:15 444:12 |
| 322:3,12,14,19 | 361:21 362:3 | 403:20 404:13 | 444:15 445:6 |
| 323:5 325:7,9 | 363:11 364:13 | 405:13 406:20 | 446:1 447:11 |
| 326:11,16,23 | 364:16,23 | 407:6 408:9,14 | 447:18 448:6,7 |
| 327:13 328:4 | 365:9,16,21 | 408:17,20 | 448:9,12,19,20 |
| 328:10,14 | 366:2,13,24 | 409:7,10,16 | 448:24 449:3 |
| 329:9 330:16 | 367:2,4,10,12 | 410:17 411:8 | 449:14,14 |
| 330:24 331:2,4 | 367:20,24 | 411:16,19 | 450:5,15,19 |
| 331:13,19 | 368:6 369:18 | 412:3,14,17,21 | 451:4,13 |
| 332:2,5,10,18 | 370:24 371:10 | 413:3,5,13,17 | 452:14 453:20 |
| 332:21 333:14 | 371:19 372:1 | 414:7,16,19 | 454:11,23,23 |
| 333:21 334:24 | 373:6,13,19,24 | 415:6,16,20 | 454:24 455:9 |
| 335:14 336:12 | 374:10,11 | 416:4,7,14,17 | 455:17,20 |
| 336:22 337:5 | 376:3,9,17 | 417:1,10,12,19 | 456:10,12 |
| 338:13 339:1,4 | 377:2,6,19 | 418:8,14,19 | 457:6,19 458:6 |
| 339:7,16 340:1 | 378:6,8,14,20 | 419:12,16,20 | 458:16,18 |
| 340:4,8,13,16 | 379:3 380:24 | 420:15 421:3 | 459:1,1,17 |
| 340:23 341:2,7 | 381:1,9,11,23 | 421:16,19,20 | 460:6 461:21 |
| 341:15,19,22 | 381:24 382:11 | 421:24 422:7 | 463:9 464:6,10 |
| 342:14,17 | 382:12,18 | 422:15 423:8 | 464:23 465:9 |
| 343:2,10,18 | 383:2,23 384:2 | 423:17 424:2,2 | 465:20 466:10 |
| 344:18 345:2 | 384:3,9 385:6 | 424:5,23 | 468:1,24 469:4 |
| 346:3,18 347:5 | 385:24 386:4 | 425:10,17,21 | 469:15,18 |
| 347:22 348:4 | 386:24 387:3 | 426:2,5,16 | 470:6,11 471:1 |
| 348:17 349:24 | 387:11,12,15 | 427:16 428:9 | 472:19 473:6 |
| 350:6,8,9,12,21 | 387:22 388:3 | 428:15 429:10 | 475:7,22 |
| 351:2,10 352:8 | 389:8 391:8,11 | 430:22 431:5 | 476:19 477:2 |
| 352:21 353:19 | 392:1,10,19 | 431:10,17,21 | 477:11,24 |
| 354:12 355:9 | 393:17 394:12 | 432:3,20 433:6 | 478:5,21 479:8 |

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.