

# Exhibit C

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
SOUTHERN DIVISION  
No. 7:23-CV-897

IN RE: )  
)  
CAMP LEJEUNE WATER LITIGATION)  
)  
This document relates to )  
)  
ALL CASES )  
)

\* \* \* \* \*

The remote video deposition of  
MORRIS MASLIA, taken via  
Zoom videoconference on the 29th day  
of May, 2025, commencing at  
approximately 11:58 p.m. EST.

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A P P E A R A N C E S

FOR THE PLAINTIFF:

WEITZ & LUXENBERG  
700 Broadway, 2nd Floor  
New York, New York 10003  
BY: Laura J. Baughman, Esq.  
Lbaughman@weitzlux.com  
Devin Bolton, Esq.  
Dbolton@weitzlux.com

FOR THE DEFENDANT:

U. S. Department of Justice  
P.O. Box 340, Ben Franklin Station  
Washington, D.C. 20044  
BY: Haroon Anwar, Esquire  
Haroon.anwar@usdoj.gov  
Giovanni Antonucci, Esquire  
Giovanni.antonucci@usdoj.gov

ALSO PRESENT:

Alex Spiliotopoulos  
Deanna Havai

VIDEOGRAPHER:

James Vonweigen

Lois Anne Robinson, RPR, RDR, CRR  
Court Reporter

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I N D E X

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1 VIDEOPHOTOGRAPHER:

2 We're now on the record.

3 My name is James Vonwiegen. I'm a  
4 videographer for Golkow.

5 Today's date is Thursday, May 29th,  
6 2025, and the time is 11:58 a.m.

7 This remote video deposition is being  
8 held in the matter of Camp Lejeune Water  
9 Litigation, No. 7:23-CV-897, versus the United  
10 States of America, for the United States District  
11 Court for the Eastern -- Eastern District of  
12 North Carolina.

13 The deponent is Morris Maslia.

14 All parties to the deposition are  
15 appearing remotely and have agreed to the witness  
16 being sworn in remotely. Due to the nature of  
17 remote reporting, please pause briefly before  
18 speaking to ensure all parties are heard  
19 completely.

20 Counsel will be noted on the  
21 stenographic record.

22 The court reporter is Lois Robinson and  
23 will now swear in the witness.

24 MORRIS MASLIA,  
25 the witness, after having first been

1 duly sworn to tell the truth, the whole truth,  
2 and nothing but the truth, was examined and  
3 testified as follows:

4 EXAMINATION

5 BY MR. ANWAR:

6 Q Good afternoon, Mr. Maslia.

7 A Good afternoon.

8 Q Nice to see you again.

9 My name is Haroon Anwar. We've met  
10 before, in your prior two depositions in this  
11 case; correct?

12 A That is correct, sir.

13 Q All right. My time is somewhat limited  
14 with you today, so I'm sort of not gonna go  
15 through all of the deposition rules again other  
16 than to say the same rules apply as before and as  
17 in your prior depositions in March of 2025 and  
18 September of 2024. Do you understand that?

19 A Yes, I do.

20 Q Okay. And the most important rule is  
21 to testify truthfully, because you are under oath  
22 as if you were in an actual court of law. Do you  
23 understand that?

24 A Yes, I do.

25 Q Is there anything that would prevent

1 you from testifying truthfully here today?

2 A No, there's not.

3 Q I see that you're in a room there. Is  
4 there anyone in that room with you currently?

5 A No. There is no one else in this room.

6 Q Okay. And do you have any materials or  
7 notes there with you in that room?

8 A I have the documents that the  
9 plaintiffs' legal group submitted to DOJ  
10 pertinent to Tarawa Terrace, model bias, and  
11 geometric mean analysis.

12 Q Understood.

13 Are you referring to the -- the  
14 supplemental report that you submitted in this  
15 case?

16 A Yes, I am.

17 Q And do you have with you the -- the  
18 spreadsheets that accompanied that report as  
19 well?

20 A Yes, I do. I printed everything out.

21 Q Okay. And aside from the supplemental  
22 report and those two spreadsheets, do you have  
23 anything else in the room there with you?

24 A I've got the published ATSDR Tarawa  
25 Terrace Chapter A report.

1 Q Okay.

2 A Okay. And a journal article.

3 Q What -- what journal article do you  
4 have there with you?

5 A I've got the journal article by J.  
6 Felix Rogers, published in 1999. It also uses  
7 and discusses the use of model and geometric  
8 bias, or epidemiological case-control studies.

9 Q Did you cite that publication in your  
10 supplemental report?

11 A I don't know if I cited it in my --  
12 I don't believe I cited it in my  
13 supplemental, but I believe I cited it in the  
14 original ATSDR report under the reference  
15 section.

16 Q Okay. Understood.

17 And why do you -- why do you have that  
18 publication with you today?

19 A It's a, in my opinion, it's a great  
20 example with a different kind of model. They  
21 used an air dispersion model rather than a  
22 contaminant fate and transport model but used the  
23 same technique that we did to assess the model  
24 fit, because they went on, after using the model  
25 result, to compute individual exposures for a

1 case-control epidemiological study.

2 Q And you said that was for a  
3 case-control epi study; correct?

4 A Yes. Yes.

5 Q Okay.

6 A And it's from a published,  
7 peer-reviewed published journal.

8 Q Understood.

9 Let's go ahead and mark as Exhibit 1  
10 your supplemental report in this case.

11 (DEPOSITION EXHIBIT NUMBER 1  
12 WAS MARKED FOR IDENTIFICATION.)

13 MR. ANWAR:

14 Gio, could you screen share and maybe  
15 drop that into the chat?

16 MR. ANTONUCCI:

17 Hey, folks, screen share is not  
18 currently turned on.

19 MR. ANWAR:

20 Well, can -- would you mind --

21 Oh, there it is. Great.

22 Q Okay. Mr. Maslia, this is a copy of --  
23 And, you know, we can scroll through  
24 all three pages of your report there for you.

25 But is this a true and accurate copy of

1 the supplemental report you submitted in this  
2 case?

3 A Yes, it is.

4 Q Okay. And that's -- that's -- you have  
5 a paper copy there with you in the room; correct?

6 A Yes -- yes -- yes, I do, right here.

7 Q All right. Feel free to refer to your  
8 paper copy.

9 A Okay.

10 Q Does your paper copy have any  
11 handwritten notes on it or anything like that?

12 A No handwritten notes. Got the same  
13 lettering or identification numbers as you're  
14 showing me on the screen at the bottom.

15 Q Understood.

16 And your supplemental report, your  
17 Exhibit 1, it's entitled "Assessing Model Fit  
18 With Sampling Data at Tarawa Terrace Water Supply  
19 Wells and the Water Treatment Plant." Correct?

20 A That is correct.

21 Q It's dated April 24, 2025; right?

22 A That is correct.

23 Q And the first page says "by Morris L.  
24 Maslia." That's you; right?

25 A That is correct. That is me. I'm the

1 author.

2 Q And you anticipated my next question.  
3 Did you draft this report?

4 A Yes, I did.

5 Q Did anyone assist you in drafting the  
6 report?

7 A Not in drafting the report.

8 Q Did you -- did anyone assist you in  
9 developing the contents within the report, for  
10 the opinions within the report?

11 A No, they did not.

12 Q Did you speak with Dr. Konikow about  
13 your opinions in this report?

14 A I asked him to review my write-up, yes.

15 Q Did he provide you with any feedback?

16 A Yes, he did.

17 Q What -- what feedback did he provide  
18 you?

19 A I believe he provided some verbiage,  
20 some more refined verbiage.

21 Q Do you recall in which -- which portion  
22 of the report?

23 A I -- I think one example where we're  
24 talking about the model bias halfway on the first  
25 page, where it says "C simulated divided by C

1 observed." Where that equals 1, I think I had  
2 said that showed, additionally, a perfect model  
3 fit, and he correctly pointed out that's -- there  
4 are other statistics you need to look at besides  
5 saying that. But it does show about -- a value  
6 of 1 shows that the model is unbiased. So I  
7 edited the text for that.

8 Q Got it.

9 Did Dr. Konikow provide you any other  
10 feedback besides that?

11 A Only about we used the detection limits  
12 and things like that towards the end. I think  
13 it's on page --

14 It may be -- yeah, under the discussion  
15 section, perhaps. Yes.

16 Looking at the detection limit,  
17 whatever value it is, versus half the detection  
18 limit, we're looking -- you know, using it as  
19 sort of a sensitivity of -- of the model to  
20 varying values assigned to nondetect values.

21 Q Understood.

22 Besides your attorney -- the attorneys  
23 for the plaintiffs in this case and besides  
24 Dr. Konikow, did anyone else review your report  
25 prior to submitting it in the litigation?

1 A Yes. Dr. Norm Jones and Mr. Jeff Davis  
2 reviewed the Excel files for accuracy and  
3 correctness.

4 Q And did you receive any feedback from  
5 Dr. Jones or Mr. Davis?

6 A Yes, I did.

7 Q What do you recall that that feedback  
8 was?

9 A It was basically I had hard-coded,  
10 which refers to hard-coding some of the formulas,  
11 and he suggested using the actual dynamic  
12 formulas so if things get changed, the formulas  
13 are still valid.

14 Q Understood.

15 Any other feedback that Dr. Jones or  
16 Mr. Davis provided?

17 A No.

18 Q Aside from the plaintiffs' lawyers,  
19 Dr. Konikow, Dr. Jones, and Mr. Davis, did anyone  
20 else review your report before you submitted it?

21 A No.

22 Q Now, you provided two spreadsheets with  
23 your -- your supplemental report; correct?

24 A That is correct.

25 Q And these spreadsheets reflect the

1 updated calculations you performed with respect  
2 to geometric bias for ATSDR's Tarawa Terrace  
3 water model; right?

4 A That is correct.

5 Q Now, one of the spreadsheets reflects  
6 the updated geometric bias calculations for the  
7 Tarawa Terrace supply wells; correct?

8 A That is correct.

9 Q And the other spreadsheet reflects  
10 updated geometric bias calculations for the  
11 Tarawa Terrace water treatment plant. Correct?

12 A That is correct.

13 Q During your deposition back in March of  
14 2025, earlier this year, you testified that you  
15 had notes reflecting these calculations. Do you  
16 recall that?

17 A Yes.

18 Q Do you still have those notes?

19 A I do not believe. Once I put it into a  
20 more formal document, then I threw away the  
21 actual handwritten notes. I felt they were, for  
22 someone else, difficult to follow; whereas, the  
23 Excel sheets and the written discussion would be  
24 straightforward and easier to -- to follow.

25 Q Understood.

1           We had, in your prior deposition,  
2 requested a copy of those handwritten notes, but  
3 it sounds like it's your testimony here today  
4 that you threw those notes away and you no longer  
5 have them.

6           A           That is correct.

7           Q           Is there -- was there anything in those  
8 notes that's not reflected in your supplemental  
9 report?

10          A           No. The report reflect the notes, my  
11 hand -- hand notes, in a more legible format and  
12 understandable format.

13          Q           Okay. I want to talk to you a little  
14 bit about geometric bias generally. My  
15 understanding is geometric bias is a statistic or  
16 a calculation that allows one to test the  
17 accuracy of a model. Is that right?

18          A           I would say it -- it allows one to test  
19 the goodness of fit -- okay? -- of the model to  
20 the field matter -- to the field matter that you  
21 have.

22          Q           Understood.

23                      And because we are -- we're talking --  
24 the focus of the litigation and the depositions  
25 is on the water models related to Camp Lejeune

1 performed by your team at ATSDR, I'm going --  
2 when I say "model," I'm going to be referring  
3 generally to groundwater models. Is that okay  
4 with you?

5 A That is okay. But for today we're  
6 referring strictly to Tarawa Terrace; correct?

7 Q Correct. Unless I -- unless I ask you  
8 a question otherwise, it's safe to assume we're  
9 talking about Tarawa Terrace.

10 A Okay.

11 Q So, now, geometric bias is expressed in  
12 terms of a simulated to observed or measured  
13 ratio; right?

14 A No. That -- that is the model bias.  
15 That is two terms. The model bias is for each  
16 individual sampling point and the equivalent  
17 simulated value. Okay?

18 And, then, when you have a series of  
19 those -- in our case, I think we had 36 for the  
20 supply wells and 25 for the water treatment  
21 plant, and when you take all of those together,  
22 then you -- then you come up with a geometric  
23 bias.

24 Q Understood. Thank you for -- for that  
25 clarification.

1           So for the Tarawa Terrace model, the  
2           geometric bias was calculated to assess the  
3           goodness of fit or the calibration of the fate  
4           and transport model for PCE? Is that right?

5           A           The model results, yes. The simulated  
6           or reconstructed concentrations at the water  
7           supply wells and, separately, at the water  
8           treatment plant.

9           Q           Okay. Now, a geometric bias number  
10          below 1 indicates that the groundwater model is  
11          underpredicting; correct?

12          A           That's correct.

13          Q           In other words, for -- for -- I guess,  
14          generally speaking, when we say  
15          "underpredicting," we mean that the model  
16          simulated results are lower than the actual  
17          real-world concentration or sampling data.  
18          Correct?

19          A           It would be lower than -- in the  
20          overall sense, than the measured sampled data,  
21          yes.

22          Q           And a geometric bias equalling 1  
23          indicates exact agreement between the -- the  
24          groundwater model or the model simulated results  
25          and actual real-world sampling data.

1 A Again, that's where I think the  
2 document that I provide where we used unbiased is  
3 probably a more appropriate term. To get an  
4 exact match, you would have to do some other  
5 statistics.

6 Q Understood. I -- and I will represent  
7 to you the -- the exact -- I guess exact  
8 agreement language came directly from ATSDR's  
9 report in chapter --

10 Well, it sounds like you don't  
11 necessarily disagree with --

12 We're -- we're basically saying the  
13 same thing. Is that fair?

14 A That is -- that is fair. Yes, sir.

15 Q And, then, a geometric bias greater  
16 than 1 indicates that the model or the  
17 groundwater model is overpredicting; right?

18 A That is correct.

19 Q And, so, in other words, the -- the  
20 model simulated results are estimated -- PC  
21 concentrations, for instance, in the Tarawa  
22 Terrace water model are coming out higher than  
23 the actual available sampling data. Is that  
24 right?

25 A That is correct.

1 Q Is geometric bias the only way to  
2 assess that accuracy for goodness of fit of a  
3 model?

4 A No, it's not. There are other -- other  
5 methods.

6 Q What -- what are some of those other  
7 methods?

8 MS. BAUGHMAN:

9 I'm gonna object to that. This  
10 deposition is limited strictly to this document,  
11 not other ways he could have done it. It's about  
12 what he did here. And we've limited the scope  
13 just to what work was done, not what he could  
14 have alternatively done.

15 So I'm gonna object and instruct  
16 Mr. Maslia not to answer that question.

17 MR. ANWAR:

18 So, I guess two things. One, I would  
19 ask you to sort of limit your -- your objections  
20 to scope.

21 I think we disagree. I think this is  
22 directly relevant to the topic. And I would note  
23 on the record that we will reserve our right to  
24 go to Judge Owens and seek more time if you  
25 continue instructing Mr. Maslia not to answer

1 questions that are directly relevant to his  
2 opinions in the supplemental report.

3 Q So, Mr. Maslia, I'm gonna ask you  
4 again, is geometric -- geometric bias the only  
5 way to assess goodness of fit for a model?

6 MS. BAUGHMAN:

7 You can answer that just "yes" or "no."

8 THE WITNESS:

9 Okay.

10 Could you repeat the question one more  
11 time?

12 MR. ANWAR:

13 Q Yeah. Is geometric bias the only way  
14 to assess goodness of fit for a groundwater  
15 model?

16 MS. BAUGHMAN:

17 That's a "yes" or "no."

18 A No.

19 MR. ANWAR:

20 Q You'd agree it's important to  
21 qualitatively evaluate the results of a  
22 groundmodel water -- groundwater model; right?

23 A Yes.

24 Q And it's important to compare the  
25 simulated results from a groundwater model with

1 the actual sampling data; right?

2 A Yes.

3 Q And in order to --

4 Well, strike that.

5 Generally speaking, when -- when  
6 evaluating the goodness of fit for a groundwater  
7 model, and let's say, in this instance,  
8 particularly the Tarawa Terrace model, don't you  
9 need enough data to determine a trend in  
10 observations to evaluate the goodness of fit?

11 MS. BAUGHMAN:

12 Object. Objection. Outside the scope.  
13 I'm instructing you not to answer.

14 MR. ANWAR:

15 Okay. I'm gonna note that we disagree  
16 and we reserve our right to keep this deposition  
17 open.

18 MS. BAUGHMAN:

19 Just for the record, this deposition  
20 was voluntarily allowed by us -- it's not per  
21 court order, because he provided -- Mr. Maslia  
22 provided this 4-page document at the request of  
23 the DOJ, who asked for this, and the spreadsheet.

24 So we are allowing, by agreement, not  
25 court order, questions for one hour regarding the

1 four pages and his spreadsheets.

2 The fact that a geometric bias had been  
3 done was known to you at the two prior  
4 depositions that you had of Mr. Maslia, and you  
5 could have asked any questions about alternative  
6 methods at that time.

7 MR. ANWAR:

8 Again, I'm gonna ask you to limit your  
9 speaking objections. And if we -- you know, if  
10 this continues to be an issue, we will -- this  
11 will serve as another basis to keep this  
12 deposition open.

13 What we requested in our prior  
14 deposition were his handwritten notes and not a  
15 supplemental report. But you-all sup- -- you-all  
16 provided this untimely supplemental report, and  
17 we -- we agreed to take the additional deposition  
18 time.

19 If we -- if we need more time, we'll go  
20 and get a court order, which, based on the  
21 representations you've made in court, I'm sure  
22 won't be a problem.

23 Q So, Mr. Maslia, let me ask you this.  
24 Your -- your supplemental report only addresses  
25 geometric bias as it relates to the Tarawa

1 Terrace model; correct?

2 A Model and geometric bias for Tarawa  
3 Terrace.

4 Q Understood.

5 You're not offering any opinions in  
6 your supplemental report about geometric bias  
7 related to the Hadnot Point Holcombe Boulevard  
8 model; right?

9 A No, I'm not.

10 Q And my understanding is the geometric  
11 bias wasn't calculated for the Hadnot Point  
12 Holcombe Boulevard model; correct?

13 MS. BAUGHMAN:

14 Objection. That's outside the scope,  
15 although there is a number provided in a previous  
16 report. It's just not in this report.

17 MR. ANWAR:

18 Again, I'm gonna ask you to limit your  
19 speaking objections.

20 Q Mr. Maslia, geometric bias wasn't  
21 calculated for the Hadnot Point Holcombe  
22 Boulevard model; right?

23 A It is --

24 MS. BAUGHMAN:

25 Objection. You can answer as -- as it

1 pertains to the supplemental report.

2 A All right. The supplemental report  
3 pertains strictly to Tarawa Terrace. It did not  
4 consider -- take anything with respect to Hadnot  
5 Point or Holcombe Boulevard into account.

6 Q Okay. And if you state this in your  
7 report for the Tarawa Terrace model, the  
8 geometric bias for the Tarawa Terrace water  
9 supply wells was calculated to be 5.8; correct?

10 A That is correct.

11 Q And the geometric bias for the Tarawa  
12 Terrace water supply wells, it's -- omitting  
13 TT -- well TT23, was calculated to be 3.9;  
14 correct?

15 A That is correct.

16 Q And the geometric bias for the Tarawa  
17 Terrace water treatment plant was calculated to  
18 be 1.5; correct?

19 A That is correct.

20 Q And I think you say this in your  
21 report, that these values indicate there was an  
22 overprediction in the model. Right?

23 A That is correct.

24 Q In Chapter F of the Tarawa Terrace  
25 report -- or the Chapter F report for the Tarawa

1 Terrace model states that the geometric bias  
2 values indicate that -- quote, indicate that  
3 simulated PCE concentrations moderately to  
4 substantially overpredicted observed  
5 concentrations at water supply wells.

6 Do you recall that statement?

7 A I -- I don't specifically. I don't  
8 have the report in front of me right -- right --  
9 right at this moment.

10 Q Okay.

11 A If it's -- if it's a published ATSDR  
12 report, then it's written there.

13 Q Do you agree that, based on those  
14 values, the simulated PCE concentrations  
15 moderate -- based --

16 Let me ask that again.

17 Do you agree that, based on the  
18 geometric bias values we just discussed, that the  
19 simulated PCE concentrations moderately to  
20 substantially overpredicted observed  
21 concentrations at water supply wells?

22 MS. BAUGHMAN:

23 Object to form.

24 A I'm sorry. I didn't hear that, the  
25 last comment.

1 MS. BAUGHMAN:

2 I -- I objected to the form.

3 THE WITNESS:

4 Okay.

5 MS. BAUGHMAN:

6 You can answer.

7 THE WITNESS:

8 Okay.

9 I would say that if we're talking about  
10 the TT water supply wells, there is an  
11 overprediction, and, you know, some are close to  
12 1. Some are great -- greater than 1. Okay?

13 MR. ANWAR:

14 Q Well, you -- do you -- you don't  
15 disagree with what is stated in ATSDR's report,  
16 do you?

17 A I don't disagree --

18 MS. BAUGHMAN:

19 Object to form. Object to foundation.

20 A I don't disagree with what is published  
21 in the ATSDR.

22 MR. ANWAR:

23 Q Understood.

24 Now, you can feel free to refer to  
25 Exhibit 1 as we continue to talk through these

1 issues.

2 A Okay.

3 Q So based on your supplemental report,  
4 my understanding is -- and the model itself -- is  
5 that for the Tarawa Terrace model, the geometric  
6 bias was calculated using what you describe as,  
7 quote, duplicate samples. Correct?

8 A That is correct.

9 Q And when you say "duplicate samples,"  
10 you don't literally mean identical samples;  
11 correct?

12 A No. Samples that were either --  
13 I explained this in the report.  
14 -- that were either collected on the  
15 same day or within the same month. We were not  
16 provided any QA/QC sheets as far as the handling  
17 of individual samples. Only the results.

18 Q In -- in your supplemental report, you  
19 recalculated the geometric bias using the average  
20 of multiple samples taken within the same month.  
21 Correct?

22 A That is correct.

23 Q And this correction was done at the  
24 suggestion of Dr. Konikow?

25 A He initially did not suggest that I do

1 that with respect to the model of geometric bias.  
2 He was pointing out -- I believe it's in his  
3 expert -- his review, the DOJ expert reports --  
4 that there were duplicate samples and that  
5 perhaps a mean value or one value for the month,  
6 because we simulated monthly time steps to be  
7 used.

8 Q Understood.

9 And for the Tarawa Terrace model, the  
10 geometric bias was also calculated by excluding  
11 nondetect samples; correct?

12 A Initially, yes.

13 Q Initial- --

14 What do you mean by "initially"?

15 A The first spreadsheet for both the key  
16 water supply wells, which is a duplicate of table  
17 9, I believe, in the published Chapter A report  
18 and the water -- water treatment plant, which is  
19 a duplicate of the table A10, those were computed  
20 by not considering or removing not -- a sample  
21 below detection limit.

22 Q And those values and that geometric  
23 bias calculated by excluding nondetect samples,  
24 that's directly reflected in the current  
25 published reports for the Tarawa Terrace model;

1 right?

2 A Yes. Yes. Tables A9 and A10.

3 Q And those nondetect values were  
4 excluded because the formula to calculate  
5 geometric bias doesn't allow for zero or  
6 undefined values? Is that right?

7 A Not necessarily. They were initially  
8 not included because there could be a variety of  
9 ways of assigning a value to a nondetect,  
10 anywhere from zero, which would preclude using a  
11 geometric bias formula, to 50 percent of the  
12 detection limit to, you know, the detection  
13 limit.

14 Q So why was -- why were the -- the  
15 nondetect sampling data or sampling -- samples  
16 excluded from the calculation of geometric bias  
17 originally?

18 A We wanted to try to include as many of  
19 the actual samples that were above detection  
20 limit as possible. So that's why we -- we did  
21 that in the original reports.

22 Q Did you consider assigning a value to  
23 nondetects in using the assigned value in your  
24 calculation of geometric bias when the -- the  
25 Tarawa Terrace model was being developed?

1 A We had some internal discussions, and I  
2 believe we came to a conclusion that it would be  
3 best at the time just to list the nondetects,  
4 which we did in tables A9 and A10, but, in  
5 computing the model of geometric bias to assess  
6 if it's a fit, not to include them.

7 Q Why did you want to include as many  
8 samples above the detection limit in calculating  
9 the geometric bias originally?

10 A Because if the sample comes in at below  
11 detection limit, as I've stated before, you don't  
12 know what value it is. Okay? So now you're  
13 introducing even more uncertainty into your  
14 analysis by arbitrarily assigning a -- a -- a  
15 value just to include that sample.

16 Q In --  
17 So, now, in your supplemental report,  
18 you've recalculated the geometric bias using  
19 assigned values for nondetect samples; correct?

20 A That is correct.

21 Q And in one scenario, you assigned a  
22 value, the detection limit; correct?

23 A That is correct, sir.

24 Q In the other scenario, you assigned a  
25 value of half the detection limit; correct?

1 A That is -- that is correct.

2 Q And this correction was also suggested  
3 by Dr. Konikow; right?

4 A Yes. He suggested, I believe, if -- if  
5 I recall our conversation, 50 percent, and then  
6 said, well, we can go ahead and do the detection  
7 limit value 1.0 times detection limit, and it  
8 would be sort of like a small sensitivity  
9 analysis to see how sensitive the geometric bias  
10 and the model bias is to different values  
11 assigned to nondetects.

12 Q Did Dr. Konikow tell you why he -- he  
13 suggested assigning a value to the nondetect  
14 samples?

15 A I -- I think it was just a -- you know,  
16 to --

17 I think at the point where we started  
18 thinking about what impact or effect of  
19 reanalyzing the geometric bias, it would be a  
20 good way to test out to a sensitivity analysis.  
21 In other words, using the published results,  
22 unaltered in any way, then using -- taking the  
23 mean values, the duplicates, and then also  
24 assigning different values to the nondetects.

25 Q Understood.

1           Now, the two corrections taken  
2 together, the averaging of this -- this same --  
3 the samples within the same month and the  
4 assignment of a value to nondetect samples, those  
5 resulted, when you recalculated the geometric  
6 bias, in a geometric bias closer -- lower than  
7 the original calculated geometric biases;  
8 correct?

9           A           Are you referring to the water supply  
10 wells or the water treatment plant or both, or  
11 what are we referring to?

12          Q           Referring to both right now. But --

13          A           Okay. Let me just peek here. Yes,  
14 yes, yes. Okay. That's -- I'll agree -- agree  
15 with that. I think that's in a table here.  
16 Okay. Yes.

17          Q           And when I say "lower," I mean lower in  
18 the sense that it's now closer to 1; correct?

19          A           That is correct.

20          Q           And if we turn to, on Exhibit 1, to  
21 table 2 in your report --

22          A           Yes. I'm looking at that now.

23          Q           Okay.

24                       -- does table 2 reflect the results of  
25 the -- all of --

1 Well, strike that.

2 Let me ask you, what does table 2  
3 reflect, in your words?

4 A Table 2 reflects we established four  
5 scenarios, which are listed in table 1.  
6 Scenario -- published with no nondetects  
7 included. And then scenario 1 would be mean of  
8 the duplicates; scenario 2, where we assigned  
9 detection limit to nondetects; and scenario 3,  
10 where we assigned 50 percent of the detection  
11 limit.

12 And then table 2 represents the  
13 calculated or computed geometric bias using  
14 equation 1, which is on the first page of the  
15 supplemental data sheet.

16 Q Understood.

17 So looking at table 2, if we start  
18 there in the section of that table, that -- that  
19 states Tarawa Terrace supply wells --

20 Do you see that?

21 A Yes, I do.

22 Q Okay. So scenario zero is what was  
23 published in the A- -- the ATSDR reports, the  
24 geometric bias. Correct?

25 A That is correct. It was important for

1 us to -- to demonstrate the requirement of the  
2 scientific method reproducibility.

3 Q So what was published in the report or  
4 calculated originally for the Tarawa Terrace  
5 model was a geometric bias of 5.8; right?

6 A That is correct.

7 MS. BAUGHMAN:

8 Object to the form.

9 MR. ANWAR:

10 Q And scenario 1 is a recalculation of  
11 the geometric bias where you're now averaging  
12 samples taken within the same month but haven't  
13 assigned a value to nondetects. Correct?

14 A That is correct.

15 Q And the calculated geometric bias there  
16 is 3.6; correct?

17 A That is correct.

18 MS. BAUGHMAN:

19 Object to the form. Object to the  
20 form.

21 These questions are about the water  
22 supply wells; right? I mean, there's two  
23 different numbers.

24 MR. ANWAR:

25 I stated at the beginning of this line

1 of questioning that we're focusing on the section  
2 of the table about the water supply wells, so I'd  
3 appreciate if you could stop interrupting and  
4 limit your objections to form. Thank you.

5 Q So, under scenario 1, the -- the model  
6 bias was calculated to be 3.6; correct?

7 MS. BAUGHMAN:

8 Object to the form.

9 A That is correct.

10 MR. ANWAR:

11 Q And based on our discussion of what  
12 geometric values represent, 3.6 -- a geometric  
13 bias of 3.6 still represents the model  
14 overpredicting; correct?

15 A Overpredicting but closer to 1.

16 Q And, so, if we take a look at scenario  
17 2 there under water supply wells, this scenario  
18 now averages samples taken in the same month and  
19 assigns the detection limit to -- to nondetect  
20 samples; correct?

21 A That is correct.

22 Q And the computed model bias there is  
23 2.5; correct?

24 A That is correct.

25 Q Okay. And, so, based on our discussion

1 earlier, 2.5 is still greater than 1 and  
2 represents that the model is overpredicting;  
3 correct?

4 A That is correct.

5 Q And, then, scenario 3 there is  
6 averaging the -- the samples taken within the  
7 same month and then assigning half the detection  
8 limit to nondetect samples; correct?

9 A That is correct.

10 Q And in computing the recalculating the  
11 model bias, that resulted in a model bias of 3.4;  
12 correct?

13 MS. BAUGHMAN:

14 Object to the form.

15 A For scenario 3, yes.

16 MR. ANWAR:

17 Q And a model bias of 3.4 represents the  
18 model overpredicting; correct?

19 A Yes.

20 Q Okay. And, then, if we focus now on  
21 the water treatment plant portion of table 2 just  
22 below the -- the water supply wells, you -- you  
23 recalculated the geometric mean bias for the same  
24 scenarios; correct?

25 A Yes.

1 Q Scenario zero is what's published in  
2 the ATSDR report; correct?

3 A That is correct.

4 Q And, so, the geometric mean bias  
5 published in the ATSDR report at the water  
6 treatment plant, Tarawa Terrace water treatment  
7 plant, is 1.5; correct?

8 A That is correct.

9 Q And with a value above 1, the -- that  
10 indicates the model is overpredicting; right?

11 A That is correct.

12 Q Scenario 1 there --

13 And I won't read that, repeat the  
14 precise calculation.

15 But scenario 1 there was calculated to  
16 have a geometric bias of 1.4; correct?

17 A That is correct.

18 Q And 1.4 being greater than 1 indicates  
19 that the model's overpredicting; right?

20 A Yes.

21 Q Now, scenario 2 there, where you -- you  
22 average the samples taken within the same month  
23 and assign the detection limit to the nondetect  
24 sampling values, that resulted in a recalculated  
25 geometric bias of .84. Correct?

1 A That is correct.

2 Q So scenario 2 there, now, indicates  
3 that the model is underpredicting? Is that  
4 right?

5 A Yes.

6 Q And then scenario 3 is -- consists of  
7 averaging the samples taken within the same month  
8 and assigning half the detection limit to the  
9 value of nondetect samples; correct?

10 A That is correct.

11 Q And the -- the recalculated geometric  
12 bias there is 1.3. Right?

13 A That is correct.

14 Q And being that 1.3 is a number greater  
15 than 1, that indicates that the model is  
16 overpredicting; right?

17 A That is correct.

18 Q In the discussion in your report about  
19 sort of recalculating the geometric bias for the  
20 water supply wells in the water treatment plant  
21 at Tarawa Terrace, did your calculations indicate  
22 an improvement in the geometric bias?

23 A For both the Tarawa Terrace water  
24 supply wells and the Tarawa Terrace water  
25 treatment plant, the recalculations indicated an

1 improved model bias, meaning closer to 1, than  
2 the original published values in the Tarawa  
3 Terrace Chapter A report.

4 Q Improved but still overpredicting;  
5 right?

6 A Except for the one case in the TT water  
7 treatment plant where you have it slightly below  
8 1. But, yeah, that's -- that's correct.

9 Q Understood.

10 Now, you're offering opinions about the  
11 reliability -- reliability and accuracy of  
12 ATSDR's water modeling efforts -- correct? -- in  
13 this case?

14 A Not -- not -- not in this document, no.

15 Q Okay. But in the -- in the case,  
16 you've offered an expert -- you've offered an  
17 expert report that you submitted in October 2023  
18 and a rebuttal report that you submitted in  
19 January 2025. Correct?

20 A That is correct.

21 Q And the opinions you offered in your  
22 initial report and your rebuttal report, those  
23 were based on calc- -- the original geometric  
24 bias calculations for the Tarawa Terrace model;  
25 right?

1 MS. BAUGHMAN:

2 Object to the form.

3 A That is correct.

4 MR. ANWAR:

5 Q And the corrections that we're now  
6 discussing in your supplemental report to the  
7 geometric bias calculation, those aren't  
8 reflected in your initial expert report or your  
9 rebuttal expert report. Right?

10 A No, they were not.

11 Q Were these corrections to the geometric  
12 bias considered at any point before submitting  
13 your expert and rebuttal reports in this case?

14 MS. BAUGHMAN:

15 Object to form.

16 A No. No, they were not.

17 MR. ANWAR:

18 Q How come?

19 A At -- at the time, I was basing my  
20 expert report on the work that I had previously  
21 done and had previously been published, which  
22 would have been the published ATSDR reports, and  
23 I saw no reason to modify any of the assessments  
24 in the ATSDR reports.

25 Once I read, as we have discussed,

1 Dr. Konikow's report or rebuttal response to the  
2 DOJ expert report where he mentioned the  
3 duplicate values and that we were doing monthly  
4 time steps, I felt he had a very valid point to  
5 be made and thought we should at least initially  
6 see what impact that would have on the ge- --  
7 calculated geometric biases.

8 Q And you testified earlier that you had  
9 considered assigning values to a geometric bias  
10 when the Tarawa Terrace model was being  
11 developed. Correct?

12 MS. BAUGHMAN:

13 Object to the form.

14 A Um, I'm not sure I quite understand the  
15 question.

16 MR. ANWAR:

17 Q Okay. I might have asked a bad  
18 question there. Let me -- let me reask it.

19 So my understanding of your testimony  
20 earlier in today's deposition was that when the  
21 Tarawa Terrace model was being developed and the  
22 initial calculation of the geometric bias for the  
23 Tarawa Terrace model was taking place, that there  
24 was some discussion of assigning values to not --  
25 undetect samples. Is that right?

1 A Internal discussions, yes. Nothing  
2 documented but just as -- as a team discussing  
3 model calibration, model results, how to assess  
4 goodness of fit.

5 Q At the time that the model was being  
6 developed, you and the -- the ATSDR water  
7 modeling team decided against assigning a value  
8 to nondetect samples in calculating geometric  
9 bias. Correct?

10 A The final report reflects that, yes.

11 Q Why did Dr. Konikow's rebuttal  
12 report --

13 A Uh-huh.

14 Q -- now in the context of litigation,  
15 change your mind about how the geometric bias  
16 should be calculated for the Tarawa Terrace  
17 model?

18 MS. BAUGHMAN:

19 Object to the form.

20 A I believe Dr. Konikow has substantial  
21 expertise and experience with a wide variety of  
22 fate and transport models at different locations,  
23 and I based it based on his expertise and  
24 experience. I thought that would be a -- at  
25 least a good path to go down to at least reassess

1 the data using his concept of taking a -- a mean.  
2 And we followed up with doing the non- --  
3 assigning non- -- nondetects.

4 MR. ANWAR:

5 Q Dr. Konikow participated in the 2005  
6 expert panel at ATSDR; right?

7 A That is correct.

8 Q And Dr. Konikow also participated in  
9 the 2009 ATSDR expert panel on the water  
10 modeling; right?

11 A That is correct.

12 Q And these corrections to the geometric  
13 bias didn't come up at that time?

14 MS. BAUGHMAN:

15 Object to form.

16 A I really don't recall. I would have to  
17 go through the trans- -- the actual verbatim  
18 transcripts, the --

19 I don't recall if they did or they did  
20 not. At the time when we held the Tarawa Terrace  
21 expert panel, I believe, in March 2005, we were  
22 just in the, I would say, initial phases of  
23 developing our approach to groundwater flow  
24 modeling and fate and transport modeling, so we  
25 would not have had any final results to assess

1 goodness of fit.

2 Q Isn't it true that you decided to  
3 recalculate the geometric mean bias for the  
4 Tarawa Terrace model only after the model came  
5 under scrutiny in this litigation?

6 MS. BAUGHMAN:

7 Object to the form.

8 A I wouldn't say that was the -- the  
9 primary focus. Again, focus was there's an  
10 expert; in this case, Dr. Konikow. He's  
11 acknowledged by other people besides me as having  
12 expertise in this area, and he mentioned -- he  
13 didn't mention the model. He mentioned the  
14 duplicate sampling data. Okay? And I recognized  
15 that, yes, we had duplicate sampling data for  
16 both the wells and the treatment plant. Perhaps  
17 we should test out his hypothesis.

18 MR. ANWAR:

19 Q Do you know, will ATSDR be correcting  
20 the Tarawa Terrace water modeling reports based  
21 on your geometric -- your corrected geometric  
22 bias?

23 MS. BAUGHMAN:

24 Object to the form. Outside the scope.  
25 I instruct you not to answer.

1 MR. ANWAR:

2 Again, disagree on being outside the  
3 scope, and we'll preserve our right to keep the  
4 deposition open.

5 Q I'd like to mark as Exhibit 2 your  
6 spreadsheet on the water supply wells.

7 A Okay. Okay. Got it.

8 (DEPOSITION EXHIBIT NUMBER 2  
9 WAS MARKED FOR IDENTIFICATION.)

10 MR. ANWAR:

11 Q Okay. So I wanted to --

12 MR. ANWAR:

13 Gio, could you just scroll down through  
14 all four pages quickly to show Mr. Maslia?

15 A Okay.

16 Q Does this appear to be a true and  
17 accurate copy of the spreadsheet that you --

18 A Yes, it does.

19 Q -- you submitted with your -- your  
20 supplemental report about the water supply wells?

21 A Yes, it does.

22 Q Okay. And these spreadsheets contain  
23 the various scenarios for calculating geometric  
24 bias for the Tarawa Terrace model; right?

25 A Yes. They should have titles in the

1 headers saying which scenario they are.

2 Q Okay. So I just wanted to ask you a  
3 few questions about this first page. This first  
4 page reflects the calculations that were  
5 performed and the geometric bias for the Tarawa  
6 Terrace model as published by ATSDR; correct?

7 A That is correct.

8 Q And it looks like the first sample you  
9 have there is from January of 1985 --

10 So let me -- let me back up for a  
11 second. Strike that.

12 There are -- there's data there listed  
13 for a few wells. I'm gonna focus our discussion  
14 on TT23, TT25, and TT26.

15 A Okay.

16 Q Focusing on TT26, it looks like the  
17 first sample that you have there is from January  
18 1985. Correct?

19 A January 16th, yes, 1985.

20 Q Okay. And you -- you don't have any  
21 samples, sampling data, prior to January 1985 for  
22 the supply wells; correct?

23 A That is correct. For --

24 We're talking about TT26 still; right?

25 Q TT23.

1 A TT --

2 Oh. I thought you said TT26. I'm  
3 sorry.

4 Q I might have -- I apologize. I think  
5 it's the same for TT26, for what it's worth.

6 A Okay. Could you clarify which well  
7 we're talking about?

8 Q Yeah. Let's -- TT23.

9 A Okay.

10 Q The first sample identified there is  
11 from January 16, 1985; correct?

12 A Yes.

13 Q And there are -- you don't have any --  
14 you didn't have any sampling data prior to  
15 January -- for the supply wells for TT23, prior  
16 to January of 1985. Correct?

17 A That is correct.

18 Q And if you look at the observed values  
19 there for sample 1 for TT23, the observed value  
20 is 132. Correct?

21 A Right. Yes.

22 Q And then it -- and then it goes down to  
23 37, 26, nondetect, 14.9, and sort of fluctuates,  
24 but it goes down. Correct?

25 A That is correct.

1 Q The Tarawa Terrace -- the supply wells  
2 in Tarawa Terrace, these supply wells in Tarawa  
3 Terrace were shut down in January -- after  
4 January of 1985; correct?

5 MS. BAUGHMAN:

6 Object to the form.

7 A I believe the last one was shut down  
8 February.

9 MR. ANWAR:

10 Q Okay.

11 A Early February.

12 Q Do you know which one that is?

13 A Um --

14 MS. BAUGHMAN:

15 I'm gonna object that that's outside  
16 the scope.

17 A I couldn't say without looking it up.

18 MR. ANWAR:

19 Q Okay. So, in any event, January or  
20 February, by February, the Tarawa Terrace supply  
21 wells here were shut down. Correct?

22 MS. BAUGHMAN:

23 Object to the form.

24 A Yes.

25 MR. ANWAR:

1 Q And, so, the only values that were  
2 available, looking at TT23, TT25, TT26, while the  
3 wells were operating, came from January or  
4 February of 1985.

5 MS. BAUGHMAN:

6 Object to form.

7 A For TT23, TT25, and TT26, yes. Yes.  
8 That's correct.

9 MR. ANWAR:

10 Q Isn't it fair to say that you only had  
11 samples -- one or two samples for each of these  
12 wells prior -- while the -- the wells were  
13 operating?

14 MS. BAUGHMAN:

15 Object to the form.

16 A There were limited -- limited data  
17 during operations.

18 MR. ANWAR:

19 Q Limited such that you -- you only had  
20 sampling data from January 1985 or maybe February  
21 1985, before the -- the wells were shut down;  
22 correct?

23 A Yes.

24 Q Now, if we turn to the third page of  
25 the spreadsheet, this is the -- these are the

1 calculations for the geometric bias based on the  
2 use of half the detection limit and averaging of  
3 samples in the same month. Correct?

4 A I believe these are the -- using the  
5 nondetects equals the detection limit, not half  
6 the detection limit.

7 Q Oh. I understand. I'm on the wrong  
8 page. I'm sorry. You're right.

9 So these are -- these are averaging  
10 samples taken in the same month and using the  
11 detection limit for nondetect values and  
12 calculating the geometric mean bias. Correct?

13 A That is correct.

14 Q Okay. And, so, on the first page  
15 there, as published by ATSDR, the geometric bias  
16 was calculated to 5.81, roughly. Correct?

17 A Well, just a minute. 5.8, yes. Yes.

18 Q Okay. And then if we go back to page  
19 3, the geometric bias was calculated to be --  
20 based on averaging the samples and using the  
21 detection limit for nondetects, the geometric  
22 bias for the Tarawa Terrace model was calculated  
23 to be 2.46. Correct?

24 A That is correct.

25 Q So the -- the geometric bias went down,

1 but it's still overpredicting; right?

2 A Yes. It was -- it became -- it was  
3 closer to 1 than the original calculation.

4 Q Understood.

5 And based on our discussion earlier, my  
6 understanding is that a geometric bias closer to  
7 1 indicates a better goodness of fit. Is that  
8 right?

9 A Yes.

10 Q Okay. Which you agreed earlier that  
11 geometric bias isn't the only way to evaluate the  
12 goodness of fit or the accuracy of a model;  
13 right?

14 A That is correct.

15 Q Another way to evaluate the -- the  
16 goodness of fit or the accuracy of the model is  
17 qualitatively; correct?

18 MS. BAUGHMAN:

19 You can answer "yes" or "no."

20 A Yes.

21 MR. ANWAR:

22 Q And if -- if we look at your  
23 calculations here, starting with --

24 Let's look at TT23, for example.

25 Starting in January of 1985, when the well was

1 still operating, the simulated value for the  
2 Tarawa Terrace model was 253 compared to the  
3 observed value being 132. Correct?

4 A I -- it's 254 on the spreadsheet. If  
5 you're looking at the top row, sample number 1,  
6 simulated is 254.0.

7 Q You're right there. So it's 2 --  
8 sample 1 is 254 for simulated, 132 for observed.  
9 Correct?

10 A That is correct.

11 Q And, then, samples 2, 3, 4 there,  
12 simulate is 2- -- simulated is 253. Observed  
13 is --

14 A Right.

15 Q -- 24.4. Correct?

16 A Those are mean -- that's a mean value,  
17 the observed.

18 Q Understood. But it's, for 2, 3, and 4,  
19 253 mean value simulated and 24.4 observed;  
20 correct?

21 A That is correct.

22 Q Example 5, 6, and 7, now, this is after  
23 the wells have been shut down. The simulated  
24 value is 265 --

25 A Right.

1 Q -- compared to an observed value of  
2 29.875. Correct?

3 A That is correct.

4 Q And if we walk through just a sample --  
5 just for TT23, samples 9, 10, and 11, the  
6 simulated values, respectively, are 274, 279,  
7 191. Correct?

8 A That is correct.

9 Q And the observed values there are 10,  
10 4, and 10; correct?

11 A Yes.

12 Q So even though the geometric bias went  
13 down, but it's still above 1, what is -- what is  
14 the -- what do these concentration values here  
15 tell you qualitatively about the goodness of fit?

16 MS. BAUGHMAN:

17 Object to the form.

18 A It tells me -- it tells me that the  
19 model's doing what we would expect it to do but  
20 at a slower rate, reducing the concentration once  
21 the wells are shut down.

22 But, again, the model is using monthly  
23 time -- time -- time steps rather than  
24 instantaneous value that's recorded as the  
25 observed sample. So, in my opinion, the model's

1 behaving correctly.

2 MR. ANWAR:

3 Q And with or without the corrections for  
4 the geometric bias at the TT water supply wells  
5 and the TT water treatment plant, the -- the --  
6 the model is still overpredicting; right?

7 A It's -- it has a geometric bias of  
8 greater than 1, so it is over- -- overpredicting.

9 Q Okay.

10 A There is no standard, published or  
11 otherwise, to tell you what a geometric bias  
12 should be.

13 MR. ANWAR:

14 Gio, could you pull up Chapter F really  
15 quick? Let's mark that as Exhibit 3 and go to  
16 page F33.

17 (DEPOSITION EXHIBIT NUMBER 3  
18 WAS MARKED FOR IDENTIFICATION.)

19 MS. BAUGHMAN:

20 Can I ask the court reporter what the  
21 time is?

22 VIDEOGRAPHER:

23 Yeah. We're at an hour.

24 MS. BAUGHMAN:

25 Can you hear me?

1 VIDEOGRAPHER:

2 We're at one hour.

3 MR. ANWAR:

4 Last question.

5 Q So this is a section of Chapter F,  
6 looking on the right-hand side, F33, that -- that  
7 discusses the geometric bias for the water supply  
8 wells.

9 Now, at the top of the -- starting at  
10 the top of the paragraph on the right-hand side,  
11 it says "of the total of 36 comparisons simulated  
12 observed PC concentrations in all water supply  
13 wells used to calculate the TT fate and transport  
14 model, including nondetected results, 17  
15 comparisons, or 47 percent, conform to the  
16 calibration standard, and 19 comparisons, or 53  
17 percent, violated the standard."

18 Does anything about recalculating the  
19 geometric mean change what's stated there in the  
20 report?

21 A As we have --

22 MS. BAUGHMAN:

23 Object to the form. And it's outside  
24 the scope.

25 Go ahead. I'll let you answer, Morris.

1 A As -- as we have -- as was discussed in  
2 the 2009 expert panel report, the, I guess,  
3 philosophy is not to use calibration standards.  
4 It's a good tool to internally start getting --  
5 to see where your calibration is heading.

6 And, so, I would -- I would say that  
7 the report states what we did at the time,  
8 published in 2007.

9 If I were to go back and look again  
10 today, we probably would not use a calibration  
11 standard as suggested by our expert panel.

12 MR. ANWAR:

13 Okay. I will, given that we're at the  
14 hour, that will be my last question.

15 I would just note for the record that  
16 the -- the witness was instructed not to -- to  
17 answer multiple questions that we believe were in  
18 the scope of the deposition, in addition to the  
19 speaking objections, and we -- we reserve our  
20 right to keep this deposition open and seek all  
21 further relief from the court.

22 MS. BAUGHMAN:

23 I just have a couple of quick follow-up  
24 questions.

25

EXAMINATION

BY MS. BAUGHMAN:

Q Yeah. I just had a couple of quick questions.

Mr. Maslia, when you look at your supplemental report that's been marked as Exhibit 1, you provided data regarding the water treatment plant for Tarawa Terrace and the water supply wells regarding model bias.

When you're assessing the reliability of the -- of the model, which is more important to your assessment? The water treatment plant geometric bias or the water supply wells?

A It's the water treatment plant, because, as explained to us by study epidemiologists, the exposure starts at the point closest to where someone is exposed to drinking water. That would be the water treatment plant, the treated water at the water treatment plant. They were not exposed to water supplied by water supply wells.

Q Okay. And just another question. You were asked several questions about the -- the results as -- the simulated values and the observed values for TT23.

1 A Uh-huh.

2 Q And with the original chapter reports  
3 published by ATSDR, there were two different  
4 geometric biases provided, one with and one  
5 without TT23. Why was TT23 treated separately?

6 A TT23, based on the records we had, was  
7 only operated for possibly seven months, eight  
8 months, at most; whereas TT26 and the other wells  
9 had a much longer operational record. And, so,  
10 we -- we thought that might have some impact on  
11 the well -- on the analysis of model of geometric  
12 bias by using that short -- short period.

13 Q Thank you. No further questions.

14 MR. ANWAR:

15 Thank you. Nothing from me.

16 VIDEOGRAPHER:

17 The time is 1:03. We're off the  
18 record.

19 (OFF THE RECORD.)

20 THE COURT REPORTER:

21 Does the DOJ need a rough draft?

22 MR. ANWAR:

23 Sure.

24 (Deposition concluded at 1:03 p.m. EST)

25

C E R T I F I C A T E

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I do hereby certify that the above and foregoing transcript of proceedings in the matter aforementioned was taken down by me in machine shorthand, and the questions and answers thereto were reduced to writing under my personal supervision, and that the foregoing represents a true and correct transcript of the proceedings given by said witness upon said hearing.

I further certify that I am neither of counsel nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.



LOIS ANNE ROBINSON, RPR, RMR  
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