

Joseph A. Brunner

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UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

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| |) | |
| JUAN DUARTE, BETSY DUARTE |) | |
| AND N.D., INFANT, BY |) | |
| PARENTS AND NATURAL |) | |
| GUARDIANS JUAN DUARTE AND |) | |
| BETSY DUARTE, LEROY |) | CIVIL ACTION |
| NOBLES AND BETTY NOBLES, |) | |
| ON BEHALF OF THEMSELVES |) | NO. |
| AND ALL OTHERS SIMILARLY |) | 2:17-cv-01624-ES-SCM |
| SITUATED, |) | |
| |) | |
| Plaintiffs, |) | |
| |) | |
| VS. |) | |
| |) | |
| |) | |
| UNITED STATES METALS |) | |
| REFINING COMPANY, ET AL, |) | |
| |) | |
| Defendants. |) | |

F.R.C.P. 30(b)(6) DEPOSITION DUCES TECUM OF DEFENDANTS
UNITED STATES METALS REFINING COMPANY, FREEPORT
MINERALS CORPORATION AND AMAX REALTY DEVELOPMENT, INC.
ORAL AND VIDEOTAPED DEPOSITION OF
JOSEPH A. BRUNNER
JUNE 7, 2018
VOLUME 2

Joseph A. Brunner

1 F.R.C.P. 30(b)(6) DEPOSITION DUCES TECUM OF DEFENDANTS
2 UNITED STATES METALS REFINING COMPANY, FREEPORT
3 MINERALS CORPORATION AND AMAX REALTY DEVELOPMENT, INC.
4 ORAL AND VIDEOTAPED DEPOSITION OF JOSEPH A. BRUNNER,
5 produced as a witness at the instance of the
6 PLAINTIFFS, and duly sworn, was taken in the
7 above-styled and numbered cause on the 7th of June,
8 2018, from 9:29 a.m. to 6:21 p.m., before Tamara
9 Vinson, CSR in and for the State of Texas, reported by
10 machine shorthand, at Vinson & Elkins LLP, 1001 Fannin
11 Street, Suite 2500, Houston, Texas, 77002-6760,
12 pursuant to the Federal Rules of Civil Procedure and
13 the provisions stated on the record or attached
14 hereto.

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Joseph A. Brunner

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Joseph A. Brunner

1 THE VIDEOGRAPHER: Okay. We are now on
2 the record. This is the beginning of day two of the
3 video 30(b)(6) deposition of Joseph Brunner. It is
4 June 7th, 2018 and the time on the monitor is 9:29
5 a.m. It's the beginning of Tape 8.

6 * * * * *

7 JOSEPH A. BRUNNER,
8 having been previously duly sworn, continued to
9 testify as follows:

10 EXAMINATION

11 QUESTIONS BY MR. NIDEL:

12 Q. Good morning, Mr. Brunner.

13 A. Good morning.

14 Q. Just a reminder, you are still under oath.

15 Do you understand that?

16 A. Yes, I do.

17 Q. Did you discuss your testimony with anyone
18 last night?

19 A. No, I did not.

20 Q. We talked about the letters that went to the
21 public, the homeowners and property owners a little
22 bit yesterday. Was -- was there a change in the
23 letter that you sent?

24 MR. SCHICK: Objection. Form.

1 A. Which -- which letter are you speaking to?

2 Q. (By Mr. Nidel) Fair enough. You used a form
3 letter to provide the results or the 95 percent upper
4 confidence limit of the mean sampling data to the
5 homeowners. Correct?

6 A. Yes.

7 Q. Okay. Did that form letter change?

8 A. I don't recall whether it did or didn't. It
9 may have. Do you have an example of a before and
10 after that?

11 Q. Well, you signed the letters. Right?

12 A. Arcadis uses my electronic signature when
13 they're preparing the letters, yes.

14 Q. Okay. Do you draft and review the letter?

15 A. I do not review each individual letter as
16 it's sent out, if that's the question.

17 Q. No. My question is: Do you review the form
18 letter before it's sent?

19 A. Generally I'm part of the group that reviews
20 the templates of the letters, if you will.

21 Q. Okay. Who else is part of that group?

22 A. Arcadis and our -- the rest of our internal
23 team.

24 Q. Who are the people that are the rest of your

1 internal team?

2 A. We have our internal counsel and potentially
3 external counsel, as well.

4 Q. Okay. Who is your internal counsel? I just
5 would like to know people's names.

6 A. Oh, for this particular project internal
7 counsel is Jason Hughes.

8 Q. Okay. Anyone else review the letters before
9 they go out?

10 A. It would probably depend on -- I mean, this
11 project has been going on for five years or so, so I
12 think different people reviewed different letters at
13 different times.

14 Q. Who else would have reviewed the letters that
15 went out with your name on them?

16 A. Our external counsel would have been David
17 Wallis. He would have been part of that review group
18 over time. Potentially some Shaw individuals early
19 on. I'm not sure whether, you know, they're involved
20 in the letters that you're speaking to, and then
21 Arcadis people.

22 Q. Okay. So you're not aware of any specific
23 changes to that form letter?

24 A. Nothing is jumping out at me right now, no.

1 Q. Okay. Were there concerns about people being
2 confused or not understanding what the presentation of
3 the upper confidence limit of the mean represented?

4 A. Confusion amongst who? Help me understand.

5 Q. Concern about confusion in the recipient.

6 When the residents got the letter, they wouldn't
7 understand what that presentation of the data meant.

8 A. I think the goal was to have a letter that
9 was understandable and I don't think we intended to
10 have any language in there that would cause confusion.

11 Q. I'm not asking if there was an intention to
12 cause confusion. I'm asking if there was a concern
13 that there may be confusion being caused.

14 A. I think generally we were concerned about
15 there being confusion in the letters and crafted them
16 such to avoid confusion to the extent that we felt was
17 necessary.

18 Q. Okay. What steps did you take to avoid
19 confusion?

20 A. I'm not sure what you're -- what you're
21 asking. I think we put together a letter that was
22 fairly straightforward and did not get into a lot of
23 mathematical discussion or it simply laid out the
24 sampling results as were determined by our sampling

1 program.

2 Q. It laid out the sampling result or it laid
3 out the 95 percent upper confidence limit of the mean?

4 MR. SCHICK: Objection. Form.

5 A. I think we went through this yesterday. It
6 laid out the 95 percent UCL number.

7 Q. (By Mr. Nidel) Okay. And was there a
8 concern that those letters would be misleading or hard
9 to understand?

10 A. Again, I think the intent was to avoid any
11 misleading or hard-to-understand language and the
12 letters are fairly simple to read.

13 Q. Okay. We talked yesterday about community
14 ambassadors and you had community ambassadors to work
15 with the community to try and I think, as you said,
16 put a local face on your project. Is that fair?

17 A. Generally, yes.

18 Q. Were there concerns in the community about
19 the safety or perhaps health concerns among some of
20 the residents?

21 MR. SCHICK: Objection. Form.

22 A. Can you be -- can you be more specific?

23 Q. (By Mr. Nidel) Did you become aware of
24 concerns in the community about the contamination on

1 people's property or what effect, if any, it might
2 have had on their health?

3 A. (No response.)

4 Q. You don't recall people raising concerns?

5 A. I'm -- I'm thinking. Ask the question again,
6 please.

7 Q. Were there concerns raised by people in the
8 community either about contamination on their property
9 or about the potential of health effects?

10 A. I'm not aware that there is any specific
11 health effect questions raised by the community, but I
12 am aware that periodically people would come into our
13 outreach office with various questions related to the
14 program as a whole, which were, in turn, you know,
15 responded to by the outreach staff at the outreach
16 office and those comments would have been logged in
17 the TIA database.

18 Q. Okay. And some of those concerns expressed
19 include concerns about health effects. Correct?

20 MR. SCHICK: Objection. Form.

21 A. I can't pinpoint to any specific health --
22 health effect question, but I have not, you know, gone
23 through the entire TIA database to understand each and
24 every comment that was received by a resident.

1 Q. (By Mr. Nidel) You don't recall any people
2 raising questions about health effects, but you had
3 Dr. McDaniels on retainer to answer questions about
4 health effects. Correct?

5 A. We do --

6 MR. SCHICK: Objection. Form.

7 A. We did make Dr. McDaniel available and I do
8 recall there was one question about health effects
9 that was not directed to the company, but I believe it
10 was directed to Mr. McNally at the open house and Mr.
11 McNally directed that person to Dr. McDaniel.

12 Q. (By Mr. Nidel) just to be clear, my question
13 is not whether there was a question about property
14 damage or contamination on people's property or health
15 effects directed specifically to the company. My
16 question is did you become aware that there were those
17 concerns in the community period?

18 A. Not specifically. I'm sorry.

19 Q. Okay. What does -- what is Amax?

20 A. What is --

21 Q. What is Amax? Is that a company?

22 A. Amax is -- it's a company, yes.

23 Q. Okay. What do they do?

24 A. They were the -- as I -- as I understand it,

1 the parent of USMR back in the time during the
2 operation of the smelter.

3 Q. How many employees does Amax have?

4 MR. SCHICK: Objection. Form.

5 A. I don't know.

6 Q. (By Mr. Nidel) Is Amax still a company?

7 MR. SCHICK: Objection. Beyond the
8 scope.

9 A. I'm not sure if Amax still exists as a
10 corporate entity or not.

11 Q. (By Mr. Nidel) Okay. What about USMR? What
12 does USMR do, if you know?

13 A. USMR is remediating -- conducting remediation
14 activities at the former Carteret site and it also
15 owns property on the Carteret property which
16 warehouses have been developed on top of.

17 Q. Do you know if USMR generates any revenue or
18 has any sales?

19 A. USMR does not have any sales. It generates
20 revenue through lease rental for the warehouses that
21 are developed on the onsite portion of the property.

22 Q. What about Freeport-McMoRan, Inc., what is
23 Freeport-McMoRan, Inc.?

24 A. Freeport-McMoRan, Inc. is the parent of

1 Freeport Minerals Corporation, to my understanding.

2 Q. Okay. How many employees does
3 Freeport-McMoRan, Inc. have?

4 MR. SCHICK: Objection. Beyond the
5 scope.

6 A. I don't know.

7 Q. (By Mr. Nidel) What does Freeport Minerals
8 do?

9 A. Freeport Minerals owns and operates a number
10 of mines and processing facilities in various
11 locations throughout the world.

12 Q. How many employees does Freeport Minerals
13 have?

14 A. I don't know.

15 Q. What about Freeport-McMoRan Copper & Gold?

16 MR. SCHICK: Objection. Beyond the
17 scope.

18 A. I'm not positive, but I believe
19 Freeport-McMoRan Copper & Gold no longer exists and
20 it's been -- there's been a name change to
21 Freeport-McMoRan, Inc., is my understanding, but I'm
22 not 100 percent positive on that.

23 Q. (By Mr. Nidel) So it's your understanding
24 that Freeport-McMoRan Copper & Gold has become

1 Freeport-McMoRan, Inc.?

2 A. That's my understanding.

3 Q. Okay. With respect to Freeport Minerals, can
4 you tell me a little bit about the structure of the
5 company?

6 MR. SCHICK: Objection. Beyond the
7 scope.

8 A. Help me understand you. A little more
9 specific question, please.

10 Q. (By Mr. Nidel) The structure of the company.
11 They have -- they have plants, they have headquarters.
12 Where is the headquarters?

13 A. The headquarters is based in Phoenix,
14 Arizona.

15 Q. Okay. How many locations do they have?

16 MR. SCHICK: Objection. Form.

17 A. I don't know the number of facilities, you
18 know, throughout the U.S. and the rest of the world
19 that all, you know, roll up into Freeport Minerals
20 Corp.

21 Q. (By Mr. Nidel) Okay. Can you identify some
22 of them that you know of?

23 MR. SCHICK: Objection. Form and scope.

24 A. Certainly. There's the Morenci facility in

1 Arizona, there's the -- we have mines in New Mexico,
2 Chino and Tyrone, we have mines in South America. We
3 have various mines in Arizona. We have -- I think
4 that covers what would be part of Freeport -- Freeport
5 Minerals Corp.

6 Q. Are there other mines across the rest of the
7 world?

8 MR. SCHICK: Same objections.

9 A. Freeport operates a mine in Indonesia, but I
10 don't know where that falls within the corporate
11 structure of the organization.

12 Q. (By Mr. Nidel) What relationship did
13 Freeport Minerals have with the Carteret smelter?

14 A. During what time period?

15 Q. When it was emitting pollutants.

16 MR. SCHICK: Objection. Form.

17 A. It would -- you know, it would be my opinion
18 that Freeport Minerals had no connection with the
19 facility while it was in production. Freeport
20 Minerals did not acquire the assets associated with
21 USMR until approximately 2007.

22 Q. (By Mr. Nidel) Okay. So you gave us a hint,
23 but how is it that Freeport Minerals became
24 responsible for the cleanup of the U.S. Metals

1 operations?

2 A. Through acquisitions. Phelps Dodge
3 Corporation acquired Cyprus Amax in I believe it was
4 1999 and one of the subsidiaries of that organization
5 was USMR. Phelps Dodge Corporation was in turn
6 acquired by Freeport in 2007, so that's -- that's how
7 USMR became part of the Freeport organization.

8 Q. And when you say Freeport, you mean they were
9 acquired by Freeport Minerals?

10 A. I don't know exactly which corporate entity
11 did the acquisition, but from an organizational
12 standpoint USMR is a subsidiary of Freeport Minerals.

13 Q. Okay. I spaced out for a second. So my
14 understanding was that Phelps Dodge bought Cyprus
15 Amax. Is that true?

16 A. That's correct.

17 Q. And then you said Freeport acquired Phelps
18 Dodge?

19 MR. SCHICK: Objection. Form and scope
20 to all these questions.

21 A. That's correct.

22 Q. (By Mr. Nidel) Okay. And you don't know
23 which Freeport entity actually acquired Phelps Dodge.
24 Correct?

1 A. I don't know precisely.

2 Q. Is it your testimony that it was Freeport
3 Minerals?

4 MR. SCHICK: Same objections.

5 A. I don't recall exactly who acquired -- you
6 know, what the corporate identity was that acquired
7 Phelps Dodge, so. . .

8 Q. (By Mr. Nidel) We talked yesterday about the
9 sampling that was done and the upper confidence limit
10 of the mean and then what we call down here in Texas
11 compliance averaging. You would agree with me that
12 there are properties that, No. 1, were samples; No. 2,
13 identified levels of contamination on the property
14 above the New Jersey cleanup standard; but No. 3, that
15 you chose not to remediate. Correct?

16 MR. SCHICK: Objection. Form.

17 A. I believe that every property that has
18 exceeded the residential cleanup standard as we've
19 explained in our remedial action work plan has been
20 remediated or will be remediated.

21 (Exhibit No. 69 marked.)

22 Q. (By Mr. Nidel) I hand you Exhibit 69. Oh,
23 we only have -- my secretary only printed one copy.

24 MR. SCHICK: What's that?

1 MR. NIDEL: It's the rest of it. I
2 didn't know I was paying for slackers.

3 Q. (By Mr. Nidel) Exhibit 69 is --

4 MR. SCHICK: Excuse me. Would you give
5 him a second just to look it over and familiarize
6 himself with it?

7 A. (Witness reviewing document.) Okay.

8 Q. Exhibit 69 is a table listing the New Jersey
9 Department of Environmental Protection Cleanup
10 Standards For Contaminated Sites. Is that correct?

11 A. It's the New Jersey soil cleanup criteria
12 under their site mediation program.

13 Q. Okay. And those are the cleanup criteria
14 that are applicable to the Carteret cleanup. Correct?

15 A. I'm not sure. It says this table was last
16 revised in 1999 so, I mean, there may be a more
17 current version of this, but it purports to describe
18 what the various cleanup standards are as of May 12th,
19 1999.

20 Q. Okay. With the exception of those numbers,
21 there's no discussion on there about upper confidence
22 limit of the mean or compliance averaging or anything
23 other than to give you a part per million or a part
24 per billion number. Correct?

1 A. That's correct.

2 Q. So, again, back to my question and we'll just
3 use the cleanup standards. In your reports, your
4 remedial action work plans and remedial investigative
5 action work plans and RIs you also list the cleanup
6 standards that are applicable to the site or to the
7 neighborhood. Correct?

8 A. We list the standards for the three
9 constituents of concern that, you know, are the
10 subject of our program, yes.

11 Q. Okay. And what are those standards as listed
12 in your reports?

13 A. For lead they're 400, for arsenic they're 19
14 and I believe copper is either 36 or 3,900.

15 Q. Okay. And when you list those in your
16 reports, you don't identify them as being subject to
17 the 95 percent upper confidence limit of the mean, do
18 you?

19 A. When they're -- when they're in the reports
20 just as, you know, in the -- basically in a table
21 saying what the cleanup criteria are, they just showed
22 the number.

23 Q. Okay. So we'll call them cleanup criteria.
24 That's what you just called them. Is that fair?

1 A. Well, that's what this document is called.

2 Q. Okay. So the cleanup criteria for lead is
3 400. Is that correct?

4 A. That's my understanding, yes.

5 Q. And the cleanup criteria for arsenic is 19.
6 Correct?

7 A. Yes.

8 Q. So back to my example: You would agree that
9 there are properties that, No. 1, were sampled; No. 2,
10 had levels of lead and/or arsenic that were above
11 their respective cleanup criteria; and No. 3, that you
12 chose not to remediate. Correct?

13 MR. SCHICK: Objection. Form.

14 A. Again, as we -- you know, I've stated a
15 number of times, our work plan, which was developed in
16 accordance with tech regulations and approved by the
17 LSRP, it provides for the use of the 95 percent UCL to
18 determine compliance with or noncompliance with the
19 cleanup criteria.

20 Q. (By Mr. Nidel) Okay. I would like an answer
21 to my question.

22 MR. SCHICK: And I object. This is the
23 third or fourth time we've been through this since
24 yesterday.

1 MR. NIDEL: Okay. Well, I need to
2 know --

3 MR. SCHICK: And he's answered it --

4 MR. NIDEL: No, he hasn't.

5 MR. SCHICK: -- three or four times.

6 MR. NIDEL: No.

7 Q. (By Mr. Nidel) I would like a yes or no
8 answer to: Are there properties that you've tested
9 found above -- found hits the soil cleanup criteria
10 that you chose not to remediate?

11 MR. SCHICK: Objection. Form.

12 A. Again, if the 95 UCL of a property indicates
13 that remediation is required pursuant to the
14 methodology in the tech regs and approved by the LSRP,
15 if there's an exceedance above the cleanup criteria,
16 that property will be remediated.

17 Q. (By Mr. Nidel) Can you answer my question?

18 A. I have answered it multiple times, I believe.

19 Q. You have not answered my question. You have
20 told your own story, but my question is: You have
21 properties that you sampled that you found arsenic
22 above 19 and/or lead above 400 and yet you chose not
23 to remediate those properties. Correct?

24 MR. SCHICK: Objection. Form and

1 sidebar.

2 A. Again, I'll just have to go back to my
3 previous answer. I'm sorry I'm not being more
4 responsive to your direct question.

5 Q. (By Mr. Nidel) What is a person to do in
6 Carteret that has lead above 400 or arsenic above 19
7 when they go to sell their property?

8 MR. SCHICK: Objection. Form.

9 Q. (By Mr. Nidel) Do they have to disclose
10 that?

11 MR. SCHICK: Objection. Form and beyond
12 the scope.

13 A. I'm not a Realtor. I wouldn't know.

14 Q. (By Mr. Nidel) Okay. Well, you talked with
15 your team about deed restrictions. Correct?

16 A. Our intention is to not utilize deed
17 restrictions on any residential properties.

18 Q. Okay. But your intention is not to clean up
19 every hit above 19 for arsenic or 400 for lead.
20 Correct?

21 MR. SCHICK: Objection. Form.

22 A. Our intention is to clean up every property
23 that has a 95 percent UCL of any of the three
24 constituents above the cleanup standards consistent

1 with the regulations and with the LSRP's guidance and
2 approval.

3 Q. (By Mr. Nidel) Okay. I understand you want
4 to rely on the LSRP's guidance and approval but you
5 submitted that plan to him for his approval. Correct?

6 MR. SCHICK: Objection. Form. Sidebar.

7 A. The plan was submitted to the LSRP for
8 approval. That's his -- or one of his roles.

9 Q. (By Mr. Nidel) Okay. It's Freeport's plan.
10 Correct?

11 A. It's Freeport's plan, that's right.

12 Q. Okay. So Freeport's plan includes leaving
13 lead above 400 and arsenic above 19 on people's
14 properties in Carteret. Correct?

15 MR. SCHICK: Objection. Form.

16 A. Freeport's plan is to clean up all properties
17 that have exceedances of the regulatory standards in
18 concentrations above the 95 percent UCL.

19 Q. (By Mr. Nidel) Okay. And that plan will
20 leave concentrations on people's properties above 400
21 for lead and above 19 for arsenic. Correct?

22 A. Again, you know, if there's, you know, UCL 95
23 percent exceedance that property will be remediated
24 and that property as defined by the regulations will

1 be considered to be clean.

2 Q. People in Carteret who have had your plan
3 executed on their property, some of them will still
4 have lead above 400 and arsenic above 19 on their
5 property. Correct?

6 MR. SCHICK: Objection. Form.

7 A. I don't know how many times I'm going to have
8 to answer this question.

9 Q. (By Mr. Nidel) You haven't answered it yet.

10 MR. SCHICK: Objection.

11 A. I believe I have.

12 Q. (By Mr. Nidel) Okay. You cannot answer with
13 a yes or no as to whether or not your plan will leave
14 lead above 400 or arsenic above 19 on individual
15 people's properties in Carteret?

16 MR. SCHICK: Objection. Objection.

17 Asked and answered repeatedly.

18 Q. (By Mr. Nidel) Can you answer that with a
19 yes or no?

20 MR. SCHICK: He doesn't have to.

21 MR. NIDEL: He has to answer whether or
22 not he can answer with a yes or no.

23 Q. (By Mr. Nidel) So that's my question.

24 A. I don't believe I can answer with a yes or

1 no. I think I've given you my answer several times.

2 Q. Okay. Are there properties that you've
3 already remediated in Carteret that remain with levels
4 of lead above 400 and arsenic above 19?

5 A. Ask that again, please.

6 Q. Are there properties that Freeport has
7 already remediated in Carteret that have levels of
8 lead above 400 or arsenic above 19 --

9 MR. SCHICK: Objection.

10 Q. (By Mr. Nidel) -- still on their property?

11 MR. SCHICK: Objection. Form.

12 A. I believe I can say yes to that, given the
13 use of compliance averaging to determine the
14 completion of remediation.

15 Q. (By Mr. Nidel) Okay. And are there
16 properties in Carteret that Freeport chose not to
17 remediate that still have levels of lead above 400 and
18 arsenic above 19?

19 MR. SCHICK: Objection. Form.

20 A. I don't believe we've chosen to not remediate
21 any properties where the 95 percent UCL has indicated
22 that there's an exceedance.

23 Q. (By Mr. Nidel) I'm sorry. Did I say 95
24 percent UCL? If I did I was mistaken. So let me just

1 ask my question again. My question is: Are there
2 properties in Carteret where people live and work and
3 play that have lead above 400 and arsenic above 19
4 where Freeport has chosen not to remediate?

5 MR. SCHICK: Objection. Asked and
6 answered.

7 A. Again, our determination of whether a
8 property is to be remediated or not is based on the 95
9 percent UCL.

10 Q. (By Mr. Nidel) Okay. And that --

11 A. And all those properties which have exceeded
12 a 95 percent UCL for any of the three constituents
13 have been remediated consistent with our remedial
14 action work plan.

15 Q. Okay. And to the converse, those properties
16 that have lead above 400 or arsenic above 19 that
17 don't exceed that 95 percent upper confidence limit of
18 the mean have not been remediated by Freeport.
19 Correct?

20 A. If there was not an exceedance of the 95
21 percent UCL, then that property would not be eligible
22 for remediation as defined in our plan.

23 Q. Okay. But that property may still have lead
24 above 400 and arsenic above 19. Correct?

1 A. Depending on how the -- on the 95 percent UCL
2 and the individual numbers that go into there is that
3 possibility, yes.

4 Q. Okay. In fact are there properties in
5 Carteret where people live, work and play where you've
6 tested, sampled, found arsenic above 19, lead above
7 400, and then based on the upper confidence limit of
8 the mean chose not to remediate?

9 MR. SCHICK: Objection. Form.

10 A. I'm not sure. I'm sorry.

11 Q. (By Mr. Nidel) You don't know?

12 A. I don't know.

13 Q. Okay.

14 (Exhibit No. 70 marked.)

15 Q. I've handed you Exhibit 70. Can you identify
16 what Exhibit 70 is?

17 A. This is a draft of that expanded AOC boundary
18 as prepared by Arcadis.

19 Q. Okay. How was the AOC boundary expanded?
20 What new areas were captured in the AOC?

21 A. There was a group of residences along
22 generally Salem and Union Avenues that was included
23 and there was a portion of a borough housing
24 development I believe was what that is on the -- I

1 guess that would be the northeast portion of the area
2 that was also included.

3 Q. Okay. Can you maybe in this pink marker just
4 hash in the areas that were added to the AOC?

5 A. (Complying.)

6 Q. Okay. And why were those areas added to the
7 AOC?

8 A. I don't recall the reason they were added.

9 Q. Okay. Do you recall Brad Campbell pushing
10 for addition of some areas to the AOC?

11 A. I recall that there was discussions with Mr.
12 Campbell on the configuration of the AOC.

13 Q. Okay. You don't recall why Freeport and U.S.
14 Metals added those areas to the AOC?

15 A. Not specifically. I mean, I know that there
16 was discussions with the Borough as discussed through
17 Mr. Campbell and there was obviously an agreement made
18 that expanded those areas in consideration of the
19 Borough's request.

20 Q. Okay. What was that request?

21 A. I believe the request was to expand the
22 boundary in that area -- in those areas.

23 Q. Okay. And why was that request made, do you
24 understand?

1 A. I don't know specifically why Mr. Campbell
2 felt that the boundary should be expanded.

3 Q. He didn't express to you that there were
4 sample results that gave him concerns about those
5 areas or some other rationale? He just asked and you
6 said sure enough?

7 MR. SCHICK: Objection. Form.

8 A. That could have been a reason, but looking at
9 the -- looking at the data here, there's -- I don't
10 see, you know, a lot of reason to move the boundary,
11 but as a concession to Mr. Campbell the company agreed
12 to do that.

13 Q. (By Mr. Nidel) Can you hash in in this lime
14 green the areas of the ISDA that were removed in
15 forming the AOC?

16 A. The areas of the ISDA that were removed?

17 Q. Yeah. So we talked earlier about that
18 northeast --

19 A. Yeah, sure, I can do that.

20 Q. Yep.

21 A. (Complying.) Okay.

22 Q. Why were those areas removed?

23 A. They were removed based on the sampling
24 results which indicated that the concentrations of the

1 constituents that were identified during the ISDA
2 program were below the cleanup standards, so we
3 proposed that those areas not be included in the IS --
4 I'm sorry, in the AOC and presented that to the
5 Borough for discussion, and as you mentioned, Mr.
6 Campbell suggested that we expand slightly in the two
7 areas that -- or, sorry, three areas that are
8 identified.

9 (Exhibit No. 71 marked.)

10 Q. I handed you Exhibit -- or I will -- I'll
11 wait, actually. I've handed you Exhibit 71 to your
12 deposition. It's an e-mail from you to Michael
13 McNally and it's Bates labeled 835371. Is that
14 correct?

15 A. Yes, that's the Bates number.

16 Q. Okay. And that's an e-mail from you.
17 Correct?

18 A. Yeah. Could you let me read it, though?

19 Q. I'm just going to ask you about one sentence
20 in it.

21 A. Okay.

22 MR. SCHICK: He's entitled to orient
23 himself, though. You can read it.

24 Q. (By Mr. Nidel) Okay. I'll just take the

1 exhibit back then. Thanks for identifying that.

2 Do you agree that the highest lead
3 concentrations are generally closer to the former
4 smelting property?

5 A. Generally, yes.

6 Q. And are there exceptions to that?

7 A. Again, there -- you know, through the AOC
8 sampling there are some high levels of lead throughout
9 the AOC, many -- many at depth that are spatially
10 varied.

11 (Exhibit No. 72 marked.)

12 Q. I'm going to hand you Exhibit 72. Exhibit 72
13 is a screen capture from your TIA database. Does that
14 look familiar to you?

15 A. I can't say I've ever seen this particular
16 drawing, but it could be what you purport it to be.

17 Q. Okay. Are you familiar with the TIA
18 database?

19 A. Generally, yes.

20 Q. Have you used it, logged in and searched
21 around?

22 A. I have used it, I've logged in, I've done
23 some very basic searching, but I'm not an expert by
24 any stretch.

1 Q. Okay. You can see in the bottom left
2 quarter -- do you understand the -- the convention in
3 the database to identify locations that have
4 exceedances in red and where there is no exceedance in
5 green?

6 A. Generally that's the convention that we --
7 the TIA database uses.

8 Q. Okay. In the lower left corner of the AOC
9 you see there's -- it looks like three lots without
10 any exceedances. Do you see that?

11 A. I'm sorry. Where?

12 Q. The lower left corner that's not the --

13 A. The lower left corner. Please point me to
14 where you're looking at.

15 Q. Yeah. I would call it the -- was that the
16 southwest corner?

17 A. Oh, yeah. Okay. I see this.

18 Q. Okay. Do you know why those samples
19 relatively close to the site were clean properties?

20 A. I can't give a specific explanation for, you
21 know, for that particular property. I don't know what
22 the depth interval of this map is. There's no legend
23 on here and -- I mean, and frankly, you know, I
24 wouldn't necessarily represent these as being, you

1 know, close to the site. You know, the smelter, if
2 you will, was quite a bit distant from those
3 particular properties.

4 Q. So you never investigated why those three
5 properties right in a row there were cleaner than the
6 properties either to the north or to the east of them.
7 Is that correct?

8 A. To my understanding, we did the sampling.
9 Those properties at least based on the samples that
10 are represented here, again, I don't know what depth
11 interval they are, but, you know, based on every
12 triangle on those three properties being green I would
13 expect that they were below the 95 UCL cleanup
14 standard.

15 (Exhibit No. 73 marked.)

16 Q. I hand you Exhibit 73. Exhibit 73 is an
17 aerial of the Carteret site with some arsenic
18 concentrations and it's Bates labeled 784674. Is that
19 correct?

20 A. Yes.

21 Q. Okay. Are you familiar with this figure?

22 A. Generally, yes, I believe it was a figure
23 that was in the 2016 remedial action part.

24 Q. Okay. And you talked earlier yesterday about

1 the dioxin testing that you did. Can you indicate
2 where it was that you took the -- you did the dioxin
3 sampling maybe with the pink marker?

4 A. I'm sorry. I'm just having a little bit of a
5 hard time here because there's no contemporary points
6 of reference on this map.

7 Q. Okay.

8 A. I'm used to looking at everything from the
9 context of where the existing warehouses are so I'm
10 having a little bit of trouble --

11 Q. I appreciate it.

12 A. -- getting my --

13 Q. There is --

14 A. -- getting my bearings.

15 Q. -- a text reference to a north warehouse
16 area, if that helps you.

17 A. Yeah. I believe they were sampled in this
18 general area here and I believe in that area, as well
19 (indicating).

20 Q. Okay. So you've indicated two lines in the
21 north -- well, one line in the north warehouse area
22 onsite as a line perimeter on which there was dioxin
23 sampling taken and then a line extending out into -- I
24 believe into Carteret indicating where offsite

1 sampling was taken. Is that correct?

2 A. That's correct.

3 Q. Okay. And you see the arsenic levels in the
4 north part of the site? They are all --

5 A. I see the various dots, yes.

6 Q. Okay. You would agree with me that that
7 north warehouse area was relatively -- relatively
8 un-impacted portion of the USMR facility. Correct?

9 MR. SCHICK: Objection. Form.

10 A. Based on these surficial arsenic values,
11 that's correct.

12 Q. (By Mr. Nidel) Are you aware of any other
13 values that indicate that that north warehouse area
14 was heavily contaminated by the USMR operations at the
15 site?

16 A. I don't have all of the -- all of the data
17 here in front of me, but, you know, it was -- it was
18 part of the site which required remediation and was
19 subsequently redeveloped as was the rest of the site.

20 (Exhibit No. 74 marked.)

21 Q. I hand you Exhibit 74. Can you identify
22 Exhibit 74?

23 A. This is a draft of maximum arsenic and lead
24 concentrations. Presumably these were obtained and

1 analyzed as part of the ISDA program.

2 Q. Was there ever a figure like this one with
3 the zones on it before the sample results were taken
4 and received?

5 A. I believe there -- I don't think I can point
6 to a specific drawing, but I believe the whole -- the
7 entire concepts of the zones was developed early on
8 and with a target number of samples within each zone.
9 So I think because we had a target number for each of
10 the zones, I presume that the concept of the zones
11 existed early on in the program.

12 Q. Okay. I understand the concept may have
13 existed. It's not rocket science. Right?

14 A. (No response.)

15 Q. Is it rocket science?

16 A. Is that a question?

17 Q. Yeah. I mean, you'd agree with me it's
18 pretty basic. You're just going out radially from
19 what you understood is the source. Right?

20 A. Sure, it's not rocket science.

21 Q. Okay. Well, I'm just wondering if the zones
22 specifically by radial distance from the stack were
23 actually defined prior to the sampling was done?

24 A. I believe they were.

1 Q. Okay. Can you point me to a document that
2 indicates where those zones were going to be divided
3 prior to that sampling being done?

4 A. No, I can't.

5 Q. Okay. And there are some sample results that
6 are actually right along the zone lines in this
7 figure. Correct?

8 A. Yeah, there's -- there's a couple.

9 Q. The north section of Chrome Park we talked
10 about yesterday, there was some deeper samples, but
11 there was a good portion of the surface samples that
12 were, quote/unquote, clean. Correct?

13 A. I believe that to be the case.

14 Q. Okay. In the south or central portion of
15 Chrome Park the same thing could be said?

16 A. Generally, yes. I think the northern portion
17 was probably the more clean than -- in the top surface
18 than the other portions of the park.

19 Q. Okay. And then the northeast section we
20 talked about that was redeveloped, that actually was
21 removed from the AOC, that portion had been
22 redeveloped and that portion was generally clean, as
23 well. Right?

24 A. Do you have a map I can look at to confirm

1 that?

2 Q. Well, you --

3 A. Are you just doing it based on this -- on
4 this --

5 MR. SCHICK: Look at No. 70.

6 THE WITNESS: 70.

7 Q. (By Mr. Nidel) You have the expanded AOC map
8 where that was removed from the ISDA. Right?

9 A. Oh, okay.

10 Q. Okay. And that was removed and --
11 particularly because it was not impacted. Right?

12 A. That's correct.

13 Q. Okay. And it was also redeveloped. Right?
14 We talked about that yesterday sometime between '60
15 and '74?

16 A. I don't know when, but it appears to be -- to
17 have been redeveloped between those two Sanborns.

18 (Exhibit No. 75 marked.)

19 Q. I've handed you Exhibit 75. Exhibit 75 is my
20 attempt to overlay your zones with the historic
21 aerial. It shows your zones on top of those areas
22 that were redeveloped. Do you see that?

23 A. Yeah.

24 Q. It's your -- essentially you confirm the

1 conceptual site model and your conceptual site model
2 was based on air deposition and the confirmation was
3 that your sampling showed that as you got further from
4 the -- particularly from the smelter stack -- which
5 stack was it that you used for that radius?

6 MR. SCHICK: Objection. Form.

7 A. I believe it was the tall stack.

8 Q. (By Mr. Nidel) The 400-foot stack?

9 A. I believe so.

10 Q. Okay. So as you got further from that
11 400-foot stack, there was a general trend of
12 decreasing contamination. Is that correct?

13 A. That was what the ISDA effort determined.

14 Q. Okay. Is that what the current sampling
15 shows?

16 A. The more current sampling indicates more
17 variability in the samples and it also indicates that
18 there is in quite a few cases considerably higher
19 levels of the three constituents of concern, well,
20 particularly lead and arsenic at depth.

21 Q. I want to clarify something. Your
22 confirmation I think of your conceptual site model is
23 not only that the levels decreased but there was a
24 drastic decrease. It decreased rapidly as you got

1 into the neighborhood. Correct?

2 A. Based on the ISDA sampling that's -- that was
3 what the findings were.

4 (Exhibit No. 76 and 77 marked.)

5 Q. I hand you Exhibit 76 and 77. Exhibit 76 and
6 77 are, again, aerials taken from the TIA database.
7 Again, there's some annotations on there and there is
8 a square that was done by selecting certain data
9 points. I'm sure you're familiar with using that in
10 the database where you can select the data points that
11 you want to grab data from. Is that -- do you see
12 that yellow square on both of those exhibits?

13 A. I see the yellow square. The technique
14 you're referring to is not something I have ever done.

15 Q. Okay. Well, what you can do in the TIA
16 database is you can select a rectangular area and then
17 have the data for those visible samples pull up in a
18 table and export to Excel. Okay?

19 A. Okay.

20 Q. So can you tell me just so I know, because I
21 don't have the numbers, there's one that's a sample
22 taken further in the north?

23 MR. SCHICK: Excuse me. Which exhibit
24 are you looking at?

1 MR. NIDEL: I'm asking him to tell me.

2 MR. SCHICK: Yeah, but which exhibit?

3 MR. NIDEL: Right. I don't know. Of

4 the two --

5 MR. SCHICK: Oh. Gotcha.

6 MR. NIDEL: -- I'm trying to get on the

7 same page.

8 MR. SCHICK: Understood.

9 Q. (By Mr. Nidel) Of the two there is a
10 selection that's further to the north. You can see
11 the north end of Chrome Park. Can you tell me which
12 of the two exhibits that is?

13 A. That would appear to be Exhibit 76.

14 Q. Okay. So 77 is the other?

15 A. Yes.

16 Q. Okay. And just -- I know you're not that
17 familiar with the TIA database, but you do recognize
18 portions of the Carteret neighborhood. Correct?

19 A. Yes.

20 Q. Okay. And Exhibit 76 is a sample. Can you
21 tell me -- you can use your other exhibits, but can
22 you tell me which zone Exhibit 76, the rectangle of
23 samples is from on Exhibit 76?

24 A. That appears to be in Zone 3.

1 Q. Okay. And how about Exhibit 77?

2 A. Appears to be Zone 2.

3 Q. Okay. And the numbers that I have there are
4 in fact the averages of the data that was selected in
5 both of those graphics. You can see for Zone 2 the
6 arsenic average was 15.0, copper 197.1 and lead 510.7.
7 Do you see that?

8 A. I do.

9 Q. And for Zone 3, greater distance from the
10 stack, arsenic was 19.1, copper was 218.6 and lead was
11 482.5. Do you see that?

12 A. Yes.

13 Q. You can also see the -- in Exhibit 76 you can
14 see the sampling in Chrome Park, north and south
15 portions of Chrome Park?

16 A. Which exhibit?

17 Q. 76.

18 A. Okay. Okay.

19 Q. Do you see the sampling locations in Chrome
20 Park?

21 A. I do.

22 Q. Okay. The north section with a decent
23 distribution of clean hits. Correct?

24 A. There's 50-50 cleans to not cleans in this

1 drawing.

2 Q. Okay. And then in that southern portion,
3 which I think is maybe the central portion of the
4 park, it looks like it's, I don't know, I'd say 80/20?

5 A. Yeah.

6 Q. 80 --

7 A. Thereabouts, yeah.

8 Q. -- clean to not clean. Correct?

9 A. That's correct.

10 Q. Okay. Do you know why the samples taken from
11 Zone 3 actually are comparable, higher in some
12 instances, lower in others, than those that were taken
13 closer to the site in Zone 2?

14 MR. SCHICK: Objection. Form.

15 A. Ask that again, please.

16 Q. (By Mr. Nidel) Do you know why we don't see
17 the same trend that you saw with those subsets of Zone
18 2 and Zone 3?

19 A. Well, I'm having a little trouble with both
20 of these and representing, you know, any of these
21 numbers as an average, first off. I mean, I don't
22 know what depth interval they've been taken from. I
23 don't know how representative these squares that
24 you've created are. I mean, you can -- you could just

1 as -- I mean, to be honest, I mean, you could just as
2 easily cherry-pick some of these squares and include
3 more or less reds or more or less greens to come up
4 with different numbers. So is this a statistically
5 significant representation of what's gone on? I mean,
6 based on -- based on these drawings, which -- you
7 know, which you've created, it indicates that, you
8 know, what you said is true, but is that. . .

9 Q. Yeah, that's helpful.

10 A. Yeah.

11 Q. So anybody could cherry-pick data and
12 probably tell any story they want out of this data
13 once they had the data. Correct?

14 A. No, once -- once you have data you use, you
15 know, statistically valid techniques to interpret that
16 data.

17 Q. Okay. What statistical significance was
18 there ascribed to your ISDA sampling and the zones
19 that you might have cherry-picked?

20 A. The zones were established to validate a
21 conceptual site model. Our consultant determined that
22 in order to have a statistically valid data set there
23 should be a certain number of samples taken within
24 each zone and that's what was done. There was enough

1 data to determine statistical validity.

2 Q. You said you don't know if the samples that I
3 selected there were representative, but you included
4 samples from Chrome Park and you included samples from
5 the redeveloped area in the northeast in your
6 assessment of that sharp decline in levels. Right?

7 MR. SCHICK: Objection. Form.

8 A. We obtained those samples as part of the ISD.
9 I don't believe we looked into the history of site
10 redevelopment at that time.

11 Q. (By Mr. Nidel) Okay. But you now know that
12 those samples are factually not representative of soil
13 that was there through the history of the smelter and
14 the cupola and the wire furnace and the open pit wire
15 burning and all those things, right, because you know
16 that they were redeveloped and, consistent with that
17 redevelopment you got low numbers for them but yet you
18 still included them in your validation of the
19 conceptual site model. Correct?

20 MR. SCHICK: Objection. Form.

21 A. We used all of the data we obtained as part
22 of our ISDA analysis.

23 Q. (By Mr. Nidel) But later you didn't use all
24 the data you obtained because you had methods to knock

1 off numbers and cross them out of your spreadsheets
2 because you didn't think they were representative for
3 some reason or another. Correct?

4 MR. SCHICK: Objection. Form.

5 A. If you're referring to a determination of
6 whether or not a sample is an outlier as determined by
7 a statistician, yes, a statistician determined whether
8 there was outliers and handled those accordingly.

9 Q. (By Mr. Nidel) Okay. What I'm asking you
10 about is can a -- can a sample site and the data
11 therefrom be a factual outlier such that it's not
12 representative because it doesn't represent soil that
13 was there for the hundred years that that facility
14 operated and may have impacted it?

15 MR. SCHICK: Objection. Form.

16 A. I'm not sure what a factual outlier is.

17 Q. (By Mr. Nidel) A factual outlier is if
18 you're trying to see if the kids in the grade school
19 all got the flu on Monday and you go and ask kids that
20 were absent from school on Monday if they got the flu,
21 okay. They weren't there to get impacted by lead and
22 arsenic, so now you come and test them and see if they
23 got lead and arsenic from a hundred years of lead and
24 arsenic and you know they weren't there until sometime

1 between 1960 and 1974. Do you understand that now?

2 MR. SCHICK: Objection. Form.

3 A. Yeah, I'm not following you.

4 Q. (By Mr. Nidel) You don't understand. All
5 right. I'll hand you Exhibit 78.

6 (Exhibit No. 78 marked.)

7 MR. SCHICK: Do you have a copy of this
8 one?

9 MR. NIDEL: I do not. Sorry.

10 Q. (By Mr. Nidel) Have you seen the figures in
11 Exhibit 78 before?

12 A. Yes.

13 Q. Okay. This is your project. Right?

14 A. Yes.

15 Q. Okay. We see the same portions of Chrome
16 Park and the same portions in the northeast there.
17 You would agree with me that those kids are not like
18 the others. Right? They're -- first figure there
19 zero to 6 inches of arsenic is almost entirely clean.
20 Correct, in Chrome Park?

21 MR. SCHICK: Objection. Form.

22 A. In the -- in the northern portions it's
23 relatively clean. In the southern portions there are
24 higher levels of exceedances.

1 Q. (By Mr. Nidel) Okay.

2 A. At least at the -- at least at the surface.

3 I was just looking at this top -- top one.

4 Q. Okay. And in that northeast corner, again,
5 we see mostly clean samples. Right?

6 A. In the zero to 6-inch interval it's generally
7 clean with it looks like three use areas that exceed
8 for lead.

9 Q. Okay. And so you got clean in the surface
10 and you got dirty below. Right?

11 A. If you -- if you -- yeah, if you look through
12 the various drawings there is clean at the surface
13 and, you know, we start seeing exceedances below
14 surface and in some cases quite a bit -- quite a bit
15 below surface.

16 Q. Okay. And so that would be consistent with
17 historic deposition starting in sometime around 1902,
18 deposition, deposition, that zero to 6-inch layer is
19 removed, it's redeveloped, there's new soil brought
20 in. Now you've got dirty below and clean on top.
21 Right?

22 MR. SCHICK: Objection. Form.

23 A. Say that again.

24 Q. (By Mr. Nidel) Yeah. What we're seeing in

1 those areas that were redeveloped that you knew were
2 redeveloped is that they're clean on top where the
3 fresh soil was brought in, but they're dirty below
4 where the soil was that sat there historically.

5 Correct?

6 MR. SCHICK: Same objection.

7 A. No.

8 MR. SCHICK: And asked and answered
9 yesterday.

10 A. It's -- as I believe I testified to this
11 yesterday, the area which is now Chrome Park was
12 formerly residential and the demolition of those
13 houses appears to have been done in place. So, you
14 know, the impacts that are being seen well below
15 ground -- the ground surface I do not believe are
16 associated with historic smelter operations.

17 Q. (By Mr. Nidel) Okay. The discussion of lead
18 paint in houses, first of all, what was the source of
19 arsenic from that demolition of the houses?

20 A. There could have been arsenic-treated wood.
21 There could have been historic fill. We don't know
22 the precise origin of -- you know, of the arsenic.

23 Q. Okay. I don't want to ask about could have
24 beens. I want to ask what is it your testimony that

1 the -- that could have led to arsenic in the subsoil
2 there other than from the smelters operations?

3 MR. SCHICK: Objection. Form. Beyond
4 the scope and may call for expert testimony.

5 A. Potentially arsenic-treated wood, pesticides,
6 herbicides containing arsenic, which were used in
7 residential scenario or potentially even an
8 agricultural scenario, you know, in the 1800s.

9 Q. (By Mr. Nidel) Okay. What did you confirm
10 to be a source of that arsenic, if anything?

11 A. At this point we have not made an attempt to
12 determine the source. Pursuant to our remedial action
13 work plan, if there is arsenic, lead or copper in
14 exceedance of the cleanup level as described in our
15 work plan, it's going to get cleaned up within the AOC
16 regardless of the attribution of that material.

17 Q. Okay. When you talk about the buried houses,
18 where was it that you found the buried debris from
19 houses?

20 A. While we were doing our sampling.

21 Q. Where?

22 A. In Chrome Park.

23 Q. Where in Chrome Park?

24 A. PPIN 1001.

1 Q. Where?

2 A. In various of the samples that were obtained
3 within each of the use areas in Chrome Park. As we
4 were drilling to obtain samples we were bringing up
5 not what we expected to bring up, dirt. We brought
6 up, you know, brick, wood, ash, other kinds of debris
7 that would have been associated with the demolition of
8 housing structures which formerly existed on that
9 property. That's what we brought up.

10 Q. I understand, but I'm asking you where? What
11 samples?

12 A. I just told you. Various samples obtained
13 from Chrome Park.

14 Q. Okay.

15 A. I don't know exactly which -- which
16 particular sample that -- you know, or samples that
17 had that.

18 Q. What sections of Chrome Park? Can you
19 highlight them in pink, please?

20 A. To my understanding, it was obtained
21 generally in these areas. Was it in every zinc drill
22 core, I don't know, but that's generally where the
23 household-related debris was obtained through our
24 sampling program, to my understanding.

1 Q. Okay. What was the source of the copper in
2 those deep samples?

3 A. I'm not sure what -- what it is.

4 Q. Okay. Was it a group of coppersmiths that
5 lived in Chrome Park before the '60s?

6 MR. SCHICK: Objection. Form.

7 A. I'm not aware of any coppersmiths in Chrome
8 Park.

9 Q. (By Mr. Nidel) You reviewed the New Jersey
10 background levels for -- we looked at the document
11 yesterday, but you had reviewed those before.
12 Correct?

13 MR. SCHICK: Objection. Form.

14 Q. (By Mr. Nidel) Background soil levels for
15 metals?

16 A. In a very, very cursory basis. I relied on
17 the consultants to provide that.

18 Q. Okay. You -- did you review the farming
19 levels for copper?

20 A. No.

21 Q. Okay. They're around -- the 90th percentile
22 is around 13 parts per million, okay, for New Jersey
23 farms, farmland, and copper levels on the historic
24 farmland. Do you understand that?

1 USMR site. Right?

2 A. Yes.

3 Q. Okay. And according to your conceptual site
4 model, well, there may not be any site-related
5 contaminants out that far. Correct?

6 A. Potentially, that's correct.

7 Q. Okay. And certainly those are farther away
8 from your conceptual site model source of that
9 400-foot stack than the samples that are in Exhibit
10 80. Correct?

11 A. Yes.

12 (Exhibit No. 81 and 82 marked.)

13 Q. I'm going to hand you Exhibits 81 and 82.
14 Exhibits 81 and 82 are data for those same areas as
15 pulled from the TIA database. So 82 is the area of
16 the AOC or the ISDA.

17 A. Okay.

18 Q. And 81 is the data for the samples pulled
19 from the transect area. Okay?

20 A. Just trying to orient myself here.

21 Q. Yeah, I tried to make them the same -- the
22 earlier one is I guess the transects, the later
23 numbered one is --

24 A. So 80 goes with 82, 79 goes with 81?

1 Q. That's right.

2 A. Got it. Okay.

3 Q. So what I tried to do, given my limited skill
4 set with the TIA database, was to pull data from the
5 database that was -- what was reflected in each of the
6 graphics and then do some analysis on the data to see
7 what trend I saw. So if you look at Exhibit 81, that
8 being the transects, you can go all the way to the
9 last page, the back page, the average arsenic 25.2.

10 Do you see that?

11 A. I do.

12 Q. Okay. The average copper 238?

13 A. Yes.

14 Q. Average lead 505. Do you see that?

15 A. I do.

16 Q. The number of samples that had an exceedance
17 of any one or more, 541. The number of samples that
18 did not have an exceedance, 294. Do you see those
19 numbers?

20 A. I do.

21 Q. Okay. So the ratio was a little less than 2
22 to 1 exceedance versus not exceedance outside in the
23 transects. Do you see that?

24 A. On these numbers, yes.

1 Q. Okay. Those numbers, to the best that I
2 pulled data from TIA database, those are the sample
3 results for the transect area. And if you do the same
4 for the AOC area -- sorry, the ISDA area, given the
5 restrictions on the AOC, but the ISDA area, you see
6 the average of arsenic, 25.58, about a little bit
7 higher than -- slightly, slightly higher than the 25.2
8 in the transects.

9 A. Uh-huh.

10 Q. You've got a copper number of 464, higher
11 than the area on the transects. And then a comparable
12 lead number of 485 parts per million lead. Do you see
13 those?

14 A. I do.

15 Q. Okay. And do you see that the ratio of
16 exceedances was 451 to 549 or roughly a .8 to 1
17 exceedance versus nonexceedance in that data set. Do
18 you see that?

19 A. In this data set, I do, yeah.

20 Q. Okay. Can you explain to me why as the data
21 in the TIA database shows as we get further out from
22 the site while we may see some decrease we don't see a
23 dramatic decrease?

24 MR. SCHICK: Objection. Form.

1 A. One thing I'm struggling with a little bit is
2 the comparison of the two data sets. The transects
3 are simply the zero to 6 and 6 to 12-inch intervals, I
4 believe is -- actually, all you've -- all you've
5 chosen here is the zero to 6-inch intervals for
6 purposes of preparing the transect data set. For the
7 AOC data set you're including many more samples
8 including those at depth, so it's not really an
9 apples-to-apples comparison. And also, you've
10 included a number of field duplicates in your
11 calculations. I don't know how that will --

12 Q. (By Mr. Nidel) Yeah, I mean, I'm --

13 A. -- bias it either way.

14 Q. I'm just a caveman when it comes to anything.

15 A. I'm --

16 Q. Yeah.

17 A. I might be Neanderthal. So, I mean, I'm not
18 very good at TIA -- TIA myself.

19 Q. I'm a few million years in front of you,
20 but --

21 A. But --

22 Q. Were there samples in the transects taken
23 deeper than zero to 12 or. . .

24 A. We've sampled zero to 6, 6 to 12, 12 to 18

1 and 18 to 24. All that's been analyzed thus far for
2 purposes of the boundary evaluation is the two
3 uppermost intervals.

4 Q. Okay. I just want to be clear because your
5 testimony makes it seem like I might have
6 cherry-picked something.

7 A. No, I'm not -- I'm not -- I'm not saying --
8 I'm just -- I'm just observing that they're kind of --
9 you know, it's a bit of apples and oranges. I'm
10 not -- not accusing you of doing any cherry-picking of
11 this. It's just two different data sets.

12 Q. I just want to be clear, you said you have
13 picked the zero to 6 and the 6 to 12 when in reality
14 you don't have results because you have chosen not to
15 analyze the samples deeper than one foot in the
16 transects. Correct?

17 A. As of this time we have not analyzed the
18 deeper samples.

19 Q. Okay. All I did in TIA was select the area.

20 A. Uh-huh.

21 Q. I did the exact same thing in both. Okay. I
22 understand it's back of the envelope --

23 A. Yeah.

24 Q. -- but it just doesn't look like a sharp

1 decrease and in fact, it looks like there's a heck of
2 a lot of lead and arsenic and certainly a lot of
3 exceedance in those transect areas that are in fact
4 further away from the site than the area in the ISDA
5 and certainly the area in Zone 1 in the ISDA. Would
6 you agree with that?

7 A. Yeah, I'm not arguing, you know, the data
8 that was pulled for this particular exercise or, you
9 know, the averages, the comparisons, you know,
10 whatever. I'm just -- you know, I'm just kind of
11 pointing out what issues at first glance on this I had
12 with the -- with the comparisons.

13 Q. I'm just trying to point out what issues I
14 had on first glance with the zone analysis.

15 A. I understand.

16 MR. NIDEL: Do you want to take a break?

17 MR. SCHICK: Sure.

18 THE VIDEOGRAPHER: We are off the
19 record. It is 10:47. It's the end of Tape 8.

20 (Break.)

21 THE VIDEOGRAPHER: Okay. We are back on
22 the record. It is 10:57 and it's the beginning of
23 Tape 9.

24 Q. (By Mr. Nidel) What's your -- what's your

1 educational background?

2 A. I have a bachelor's in chemical engineering.

3 Q. Do you have any additional education beyond
4 that?

5 A. No.

6 Q. Have you been project manager for -- are you
7 project manager for cleanup at other sites?

8 A. I manage a couple of other projects.

9 Q. What are your other projects?

10 A. I've been managing the remediation of a
11 former smelter in New York and I'm also involved in
12 remediating a former lead tannery in the upper
13 peninsula of Michigan. I've done groundwater
14 remediation at various sites in New Mexico and several
15 smaller projects, as well.

16 Q. What's the name of the smelter in New York?

17 A. Laurel Hill.

18 Q. And what's the name of the tannery in
19 Michigan?

20 A. Cannelton.

21 Q. Can you spell that?

22 A. C-A-N-N-E-L-T-O-N.

23 Q. Okay. The data for the ISDA, when did you
24 get the data for the ISDA?

1 A. I believe in the probably early part of 2015.
2 I don't remember exactly when the data was received.

3 Q. The ISDA samples were received in 2015?

4 A. It could have been 2014. I don't recall
5 exactly when. I'd have to look back at the sampling
6 reports and whatnot. I don't remember the exact date.

7 Q. When were the samples received for the rest
8 of the AOC area?

9 A. That sampling has been going on for a number
10 of years and is continuing, so we're still receiving
11 sample results for the AOC.

12 Q. Okay. When did you receive -- when did you
13 start receiving the data for the AOC?

14 A. Probably in the 2016 time frame.

15 Q. Do you know early in the year, winter,
16 spring?

17 A. I don't recall exactly. Probably midyear.
18 Again, I'd have to -- I'd have to go back. There's
19 been a lot going on on this project. I don't have all
20 these dates in my head.

21 Q. Mid-2016, is that your best estimate?

22 A. More or less, yes.

23 Q. Okay. And then what about for the transect
24 area, when did you receive that data?

1 A. The transect sampling was done in -- it's
2 all -- it's a bit of a blur. I believe in early 2017
3 or thereabouts.

4 Q. Okay. So you've had that data for maybe a
5 little over a year?

6 A. More or less, yes.

7 Q. Okay. Have you -- other than the ISDA CSM,
8 conceptual site model, confirmation analysis that you
9 did, have you ever done any analysis of the trends in
10 the investigated area of the community?

11 MR. SCHICK: Objection. Form.

12 Q. (By Mr. Nidel) Do you understand what I
13 mean?

14 A. I'm struggling with trends and investigative
15 area.

16 Q. Okay. Well, the -- you would agree that you
17 looked at trends within Zone 1, Zone 2, and Zone 3 of
18 the ISDA to confirm or validate your conceptual site
19 model. Correct?

20 A. That's correct.

21 Q. Have you applied that similar trend analysis
22 to the other sampling data that you've gathered?

23 A. Not to my knowledge.

24 Q. You have Arcadis -- Arcadis is one of the

1 biggest site remediation and engineering firms
2 probably in the world. Correct?

3 A. I don't know what their -- what their ranking
4 is, but they're a -- they're a big firm.

5 Q. Okay. Do you know how many people at Arcadis
6 are working with you on this project?

7 A. How many people at Arcadis are working?

8 Q. Yeah. What's the team at Arcadis on this
9 project?

10 A. Number-wise, probably somewhere between 30
11 and 40 right now. I mean, that would be -- that would
12 be a guess. I mean, Arcadis in addition to doing the
13 sampling work and, you know, sample prep and all of
14 that, they're also manning the outreach office for us
15 and they are also the firm that's doing the
16 remediation work. So we do have a fair amount of
17 people out there that are, you know, running backhoes
18 and dump trucks and things like that. Those are all
19 Arcadis employees.

20 Q. And you have a statistician that's working
21 there that's independently assessing the outliers.
22 Correct?

23 A. Arcadis has a statistician that they're using
24 for this project, yes.

1 Q. Okay. Have you had that statistician, for
2 example, analyze the trends geographically in the data
3 that you've gathered starting in 2014 or 2015?

4 A. Not to my knowledge.

5 Q. Okay. Is there a reason why you haven't done
6 the type of analysis that I presented to you with the
7 data?

8 MR. SCHICK: Objection. Form.

9 A. I don't understand that question.

10 Q. (By Mr. Nidel) Well, you're the project
11 manager of this cleanup. Correct?

12 A. Yes.

13 Q. And your goal is to provide the public some
14 protection from what may be contaminants related to
15 your company's former operations. Correct?

16 A. We are implementing soil sampling and
17 remediation program within -- within the AOC to
18 essentially clean up properties within the AOC to
19 below the residential cleanup standards.

20 Q. Okay. And part of that goal is to identify
21 which, if any, areas of contamination your company,
22 your company or companies, may be responsible for and
23 take responsibility for that. Correct?

24 MR. SCHICK: Objection. Form.

1 A. I believe that we have chosen to take
2 responsibility for cleaning up all of the properties
3 within the AOC that require cleanup as determined by
4 an exceedance of the applicable standard and we have
5 not -- and I think I've mentioned this before --
6 indicated that we're going to try to attribute what is
7 our material from others within the AOC.

8 Q. Okay. Well, outside of the AOC, you've made
9 efforts to try and attribute the levels that you've
10 seen to some other sources. Correct?

11 A. One of the goals of the boundary evaluation
12 is to determine the appropriateness of the boundary
13 and to the extent that there are levels of, you know,
14 lead or copper or arsenic beyond the boundary in
15 excess of standards, I believe one part of that
16 analysis would be to show that it's not from the --
17 from our facility. So I think that's really a logical
18 extension of the boundary evaluation project.

19 Q. Okay. What I -- I'm struggling with this
20 concept of the appropriateness of the boundary. So
21 you've defined a boundary based on your conceptual
22 site model, based on some of the testing, based on
23 feedback that you got from the Borough, and that
24 boundary currently goes as far north as Roosevelt

1 Avenue. Correct?

2 A. Yes.

3 Q. Okay. You have as project manager and as a
4 company determined that you're going to take
5 responsibility to remediate the area south of
6 Roosevelt within the AOC independent of attribution of
7 where that contamination may have come from. Correct?

8 A. That's what is described in our remedial
9 action work plan.

10 Q. Okay. So what is -- what does it mean to say
11 the appropriateness of the boundary? Because you've
12 selected a boundary on Roosevelt. You're not talking
13 about whether or not USMR caused the exceedances in
14 the AOC but now you're outside of the AOC and you're
15 talking about whether the boundary is appropriate.
16 And my question is appropriate for what, appropriate
17 to represent where there are exceedances, appropriate
18 to represent where there are exceedances attributable
19 to USMR or what?

20 A. It would be the latter, exceedances that are
21 attributable to USMR.

22 Q. Okay. So then you would agree with me that
23 at this stage of the project the discussion and the
24 analysis is focused on determining whether that

1 boundary is appropriate -- okay. Well, let me strike
2 that.

3 You know from your sampling of the transects
4 that there are exceedances of the cleanup standards.
5 Correct, outside of the AOC?

6 A. There are concentrations in excess of the
7 cleanup standards, yes.

8 Q. Okay. So now the debate or discussion or
9 analysis is focused on whether or not those
10 exceedances are attributable to USMR. Correct?

11 A. That's one of the purposes of the boundary
12 evaluation, if the -- you know, if the exceedances
13 beyond Roosevelt Avenue in the transect area, you
14 know, are attributable to the company and cause an
15 exceedance of the cleanup standards, then the boundary
16 would be expanded and the company would take
17 responsibility within that area. If it's determined
18 to the contrary, then the -- it's not the company's
19 plan to continue its expansion of the AOC farther
20 north.

21 Q. Have you done -- so initially you did -- in
22 the ISDA you did an analysis of the decline, okay, the
23 trend in the zones, and your determination, I believe,
24 was that if there was indication that that trend

1 analysis from Zone 1 to 2 to 3 did two things: One,
2 it confirmed conceptual site model; and 2, I believe
3 you drew a conclusion that if you were responsible --
4 if the site was responsible for contamination it was
5 mostly localized in that Zone 1. Is that correct?

6 A. That was the -- I mean, that's the -- that's
7 the basis of the conceptual site model.

8 Q. And is part of the conclusion from that trend
9 analysis something that informs your assessment of
10 whether or not the site is responsible?

11 A. Say that again.

12 Q. Yeah. Did that trend analysis inform your
13 opinion or your position as to whether or not USMR was
14 responsible for some or any of the contamination in
15 the ISDA?

16 A. As part of the ISDA sampling I don't recall
17 that we made any effort to attribute the
18 concentrations we were finding to any particular
19 source.

20 Q. Okay.

21 A. In other words, you know, we didn't say,
22 well, there is copper there but it's not ours. We
23 didn't try to make that case.

24 Q. No. But what I've seen is I've seen

1 statements that say to the extent the smelter impacted
2 those impacts were limited to areas in close proximity
3 to the site, parentheses, (Zone 1). Do you recall
4 that type of analysis?

5 MR. SCHICK: Objection. Form.

6 A. Again, that's the, you know, the basis of the
7 conceptual site model that the largest impacts
8 attributable to the site would be seen closest to the
9 city, Zone 1.

10 Q. (By Mr. Nidel) Okay. And so my question is:
11 Have you done a similar analysis now that you have --
12 well, how many samples were taken in the ISDA?

13 A. How many samples or how many sample
14 locations?

15 Q. How many sample locations?

16 A. 60 more or less.

17 Q. Okay. How many samples have been taken
18 locations in the AOC?

19 A. Individual locations, probably a couple of
20 thousand.

21 Q. Okay. How many houses or individual
22 properties are in the AOC?

23 A. We -- we break the AOC down into what's
24 called a PPIN and, you know, a PPIN is, you know, a

1 persons yard or a subdivision of that yard depending
2 on what the size is. So there are -- there's 302
3 properties, I believe, in the AOC, but there are a
4 large -- a larger number of use areas because each --
5 each PPIN may have multiple use areas. Most
6 residential ones may have two but some of the Chrome
7 Park areas have up to, you know, 16 or 20, depending
8 on the size.

9 Q. Okay. And then how many sample locations
10 have been taken in the transect areas?

11 A. I believe the goal was to get -- I believe
12 the goal was to get ten or so on each -- or maybe 20
13 in each transect, thereabouts.

14 Q. Okay. So now you have -- so that's another
15 60, roughly. Is that correct?

16 A. (No response.)

17 Q. So now -- you started with around 60. You
18 did an evaluation of the conceptual site model.
19 You've got an additional thousands in the AOC and then
20 you've got an additional 60 or so site locations total
21 data set. So you've -- your data set has increased by
22 a factor, I don't know, five to ten, maybe more?

23 A. We have a very large data set right now.

24 Q. Okay. So my question is: What are you doing

1 to determine whether that northern boundary -- well,
2 strike that.

3 What are you doing to determine whether the
4 exceedances that you're seeing outside of the AOC are
5 attributable to USMR?

6 MR. SCHICK: Objection. Form.

7 A. Actually that's a -- that's a work in
8 progress. I don't know how much I can share with you.
9 We have been looking at metals ratios where we're also
10 potentially looking at some other techniques which I
11 think is more subject of expert testimony.

12 MR. SCHICK: Yeah. I want to also stop
13 you and caution you about waiving any privilege with
14 respect to discussions with counsel or with respect to
15 experts.

16 Q. (By Mr. Nidel) I just want to be clear. I'm
17 only asking you about experts and consultants that
18 you're using for part of the remediation. So if
19 they're driving your remediation, I need to know about
20 them.

21 A. The work that Arcadis and Geosyntec have been
22 doing has been limited to the work that's already been
23 provided to you on metals ratios and that which was
24 used to determine the extent of the transects.

1 Q. Okay. Why hasn't there been additional trend
2 analysis to look at that decline curve that you might
3 look for in increasing distance from a source?

4 MR. SCHICK: Objection. Form.

5 A. Please -- please restate that.

6 Q. (By Mr. Nidel) Why have you not done an
7 additional trend analysis to see what kind of trend
8 there is as you get further from the site now that you
9 have five to ten or more times the data that you
10 started with?

11 A. I don't know.

12 Q. Your remediating properties in the, you know,
13 homes, let's not -- we're not talking about the parks
14 and public properties, but you are remediating homes
15 within the AOC. Correct?

16 A. Yes.

17 Q. Okay. Do you have an estimate of what the
18 cost is when you have to remediate a home?

19 A. It's obviously variable depending on the size
20 of the property, the -- one of the issues that is
21 frequently encountered in Carteret as part of the
22 remediation is infrastructure. It's an old area and
23 we have to pay quite strict attention to various
24 utility lines and work to ensure that we don't

1 adversely impact. So it's really a case-by-case
2 decision and very property specific and also depending
3 on how deep the excavation needs to be. There's a
4 number of factors.

5 Q. Okay. I understand there's definitely a
6 range, but can you tell me ballpark when you find out
7 that you've got five more properties that need
8 remediation if you have some idea what that range can
9 be based on, you know, further details as far as
10 depths and hardscapes and other things. Is there a
11 ballpark that you work with that says well, it would
12 be, you know, that typically means a minimum of X
13 and -- you know, the worst case was Y?

14 A. Again, it's very site specific. I don't
15 really have a rule of thumb that I will use for a
16 particular property because, again, it depends on the
17 depth and, you know, the infrastructure and there's a
18 huge difference in digging up out of property to 12
19 inches as compared to 60 inches.

20 Q. Can you give me some examples of how much it
21 cost to remediate certain properties?

22 A. Like, I mean, what are you --

23 Q. Some examples. I mean, you can remember a
24 property that only had one area that needed cleaning

1 up and that cost X and you had properties that you had
2 to do the whole front and back yards at 2 feet deep
3 and that cost a lot.

4 A. I -- I don't have any specific examples,
5 again, because it's very -- a very property specific.
6 There's a huge difference between a 12-inch targeted
7 removal and a, you know, very complicated 5-foot dig
8 where you're having to work around infrastructure,
9 protect people's decks and sewer lines and phone lines
10 and electric lines and gas lines. And, I mean, we're
11 literally in some cases hand excavating underneath gas
12 lines that we're having to suspend to ensure that
13 we're getting the material underneath. So I mean,
14 it's a wide range.

15 Q. Okay. In that extreme case that you
16 describe, can you give me an estimate of the cost?
17 I'm not asking you a --

18 A. I don't have a specific cost attributable to
19 any particular property.

20 Q. Okay. Do you get invoices per property?

21 A. No.

22 Q. Okay. What's the total that you've spent
23 with Arcadis to date?

24 MR. SCHICK: Objection. Form.

1 A. On specifically what?

2 Q. (By Mr. Nidel) Evaluating the neighborhood
3 and remediating the neighborhood.

4 A. It would only be a rough number.

5 Q. Okay.

6 A. But probably somewhere in the vicinity of 10
7 to 15 million dollars.

8 Q. And is that -- that includes the initial
9 assessment. Does that include the ISDA?

10 A. I believe it does.

11 Q. Okay. So that includes sampling work,
12 analysis for the ISDA, preparation of those reports,
13 expansion of the AOC, sampling for the AOC,
14 remediation as required by the plans for the AOC and
15 as well as the transect work as well?

16 A. That's generally correct.

17 Q. Okay. How many homes have been remediated to
18 date?

19 A. Can you define remediation? Because, I mean,
20 it's a bit of a fluid process. I kind of look at it
21 in two phases. One is the remediation where we
22 actually do the removal of the material that needs to
23 be excavated and the replacement with clean fill and
24 then the second part is what we call restoration. So

1 if the person had a grass yard, it's replaced with sod
2 or if they want, you know -- we're trying to be
3 flexible with people. So if they want to have a
4 gravel yard instead of sod or vice versa, we've
5 started remediation in one -- you know, one shape or
6 form on probably about 80 properties. We've completed
7 everything up through restoration and I don't have the
8 exact number, but probably on the order of, you know,
9 50 or so.

10 The restoration is more complex and
11 time-dependent in New Jersey in the wintertime because
12 we work as much as possible to do the remediation work
13 through snow and what have you, but because of cold
14 weather sod farms aren't open, asphalt plants aren't
15 open. So we defer final restoration until usually the
16 springtime when the weather is more favorable and
17 stabilize the person's property to their satisfaction
18 during the winter months. So there's a bit of a lag
19 between restoration -- or from remediation to
20 restoration in some cases.

21 Q. Okay. And then how many do you have left
22 identified to be remediated?

23 A. Probably on the order of another 150 or so in
24 round numbers.

1 Q. Okay. So I think your first number was 80
2 and your to do list is about 150. Is that right?

3 A. Yeah, I mean, again, in round numbers. Might
4 be a little more than 150, I mean, if I'm assuming.
5 We may have out of the 300 PPINs that are the example,
6 you know, maybe 250 or so will ultimately require
7 remediation.

8 Q. Okay. And you have no plan to remediate the
9 exceedance that you found in the transect area.
10 Correct?

11 A. At this time, no.

12 (Exhibit No. 83 marked.)

13 Q. I want to try and go through some examples so
14 I understand the process here. I'm going to hand you
15 Exhibit 83. Exhibit 83 is an Excel spreadsheet that
16 was produced by U.S. Metals and we can probably see a
17 Bates number there, 85270. It's in the bottom
18 corner --

19 A. I do see it, yes.

20 Q. -- tiny. Some of these native files may or
21 may not come with Bates numbers but we'll see. But
22 it's a remediation for 25 Salem Avenue, the upper
23 confidence limit summary. Is that fair?

24 A. That's what it says, yes.

1 Q. Okay. So if you could walk me through this.
2 It looks like they're -- we have there sample results
3 for arsenic and lead in the three depth intervals and
4 we see exceedances throughout the surface for arsenic
5 and throughout the surface for lead. Correct?

6 A. Yes.

7 Q. Including exceedances -- one exceedance for
8 lead above the 1,200. Correct?

9 A. Yes.

10 Q. Okay. And then you calculate the upper
11 confidence limit of the mean below each of those.
12 Right?

13 A. Correct.

14 Q. So what is -- why is there only one upper
15 competence limit of the mean calculated? I thought
16 that was calculated at each depth interval?

17 A. I'm not sure.

18 Q. Okay. Is it your testimony that that should
19 be done at each depth interval?

20 MR. SCHICK: Objection. Form.

21 A. No. And, you know, this is -- you know, I'm
22 probably not the most qualified person to answer how
23 all of this works, but it's my understanding that the
24 way the -- for remediation purposes, the way the

1 calculation works is New Jersey looks at the entire
2 zero to 24-inch interval as the surface and it's
3 then -- the UCL is then calculated on that for
4 remediation purposes. Again, I'm not the expert on
5 how this is -- this is all done.

6 Q. (By Mr. Nidel) Okay. Who would be better to
7 talk to about this?

8 A. I would suggest that one of the Arcadis
9 people would probably be able to talk to you about it
10 in extreme detail.

11 Q. Who at Arcadis?

12 A. More than likely Lisa Szegedi.

13 Q. Okay. But it does look to you like they're
14 doing the upper confidence limit including the 12 to
15 18 results. Correct?

16 A. I don't know which of all of these numbers
17 that are in, you know, the arsenic and the lead
18 portions of the chart are used to calculate that
19 particular UCL.

20 Q. Okay. But you don't see three different UCLs
21 for each depth interval. Right?

22 A. I don't. I see one for arsenic and one for
23 lead.

24 Q. Do you know why certain numbers are shaded in

1 that and why certain numbers are not?

2 MR. SCHICK: Objection. Form.

3 A. It looks like the ones that are shaded exceed
4 the numerical standard.

5 Q. (By Mr. Nidel) Okay. So it looks like we
6 actually have some answers there in the notes. Gray
7 shading values used in the UCL. Do you see that?

8 A. Okay.

9 Q. It's No. 3. So it looks like they definitely
10 were using certain depths and I guess -- I guess it
11 looks to me like what they're doing is using the next
12 -- the depth interval that's next lowest or next
13 deepest to an exceedance. Does that look like it to
14 you?

15 A. That's what it looks like, and yeah, I'm sure
16 Ms. Szegedi can explain this in a lot of detail.

17 Q. Okay.

18 A. But yes.

19 Q. Do you know why that is, that they were
20 using -- they were including the depth interval below
21 the last that exceeded in calculating one overall
22 upper confidence limit?

23 A. It's my understanding that the protocol on
24 how these numbers are calculated is consistent with

1 the New Jersey tech regs and that's how Arcadis has
2 been proceeding with this with these calculations.

3 Q. Okay. I thought I understand -- stood from
4 yesterday that the upper confidence limits were
5 calculated for each depth interval?

6 A. I believe they are for sampling purposes to
7 determine, you know, how deep sampling goes, but then
8 for remediation obviously based on this there's --
9 there's a different way to use the numbers.

10 Q. Okay. Was that explained in your letters?

11 A. Not to my knowledge.

12 Q. Okay. We can see that post-remediation
13 you've got it looks like what they did was they put
14 clean fill on the surface and then they put some --
15 they picked some -- did some spot fill down to the 6
16 to 12 level. Right?

17 MR. SCHICK: Objection. Form.

18 A. Some spot fill down to the. . .

19 Q. (By Mr. Nidel) Oh, maybe -- maybe not,
20 actually. They only -- they only remediated zero to
21 6. Right?

22 A. It looks like they remediated the zero to 6.
23 That's right. That's correct.

24 Q. And so what they -- what they left --

1 MR. SCHICK: You know, Note 10 -- I just
2 want to point something out. Note 10 --

3 MR. NIDEL: You can point it out to me.

4 MR. SCHICK: Yeah, I am.

5 MR. NIDEL: No, you can point it out to
6 me without the witness.

7 MR. SCHICK: Fine. Can we take a
8 30-second break off the record.

9 MR. NIDEL: Sure.

10 THE VIDEOGRAPHER: We are off the
11 record. It is 11:29 a.m.

12 (Break.)

13 THE VIDEOGRAPHER: Okay. We are back on
14 the record. It's 11:30 and it's the continuation of
15 Tape 9.

16 Q. (By Mr. Nidel) Okay. It looks like they
17 only remediated the upper 6 inches of soil. Correct?

18 A. They replaced the 6-inch interval with clean
19 backfill.

20 Q. Okay. And to counsel's point, there is a
21 note, Note 10, I believe it's a standard note that
22 indicates the process was to use clean topsoil for
23 zero to 6 and to use a general fill for deeper
24 intervals, but it does not look like that deeper fill

1 was used in this example. Correct?

2 A. Say that again, please.

3 Q. There is a note, and I'm only trying to
4 address a concern raised by counsel --

5 A. Uh-huh.

6 Q. -- that in general excavations below zero to
7 6 use a different quality of fill. Right?

8 A. There's different fill used for what I
9 generally call backfill and that's used for anything
10 below 6 inches. The zero to 6-inch interval uses
11 what's more considered topsoil-like material, more of
12 a growth -- acceptable growth medium and that's what
13 used for the top 6 inches.

14 Q. The only reason I'm furthering the discussion
15 is because I think I was being suspected of leading
16 you to my own conclusion. I may have made a mistake,
17 however, you would agree with me that that general
18 fill was not used on this property. Correct?

19 A. This particular property -- well, the
20 remedial action plan for this particular property only
21 required remediation of the top 6 inches and in this
22 case the topsoil was used for that.

23 Q. Okay. And what was left behind was one, two,
24 three, four, five -- six exceedances for arsenic in

1 the 6 to 12 range and one, two -- three exceedances
2 for lead in the 6 to 12 range. Correct?

3 A. That's correct.

4 Q. Okay. So I had asked you earlier if there
5 were examples where you would actually remediate and
6 yet leave behind soils that exceeded the cleanup
7 standard and I don't think you could give me a yes or
8 no answer on that. Does this confirm that in fact you
9 remediate properties and some of them you leave them
10 with soil that exceeds the New Jersey cleanup standard
11 of 400 for lead or 19 for arsenic?

12 MR. SCHICK: Objection. Form.

13 A. This confirms that in some cases below the
14 clean interval that there are point source exceedances
15 of the standard.

16 Q. (By Mr. Nidel) Okay. Is it always below a
17 clean interval?

18 A. I believe that's true, but. . .

19 Q. Do you know of examples where that's not
20 true?

21 A. Off the top of my head, I do not. Sorry.

22 (Exhibit No. 84 marked.)

23 Q. Okay. Hand you Exhibit 84. 84 is a letter
24 signed by you dated May 16th, 2017. Is that correct?

1 A. That's what it appears.

2 Q. And it's for PPIN 4094. Is that right?

3 A. Yes.

4 Q. And it indicates in the middle there,
5 Enclosed is the Property Sampling Report for your
6 property. Analysis of soil samples collected on your
7 property indicate that measured concentrations of
8 arsenic, copper, and lead are below the cleanup levels
9 established by the NJDEP. Do you see that?

10 A. I do.

11 Q. And then it says their soil doesn't require
12 cleanup. Right?

13 A. That's what it says.

14 Q. And then it's got a property sampling report
15 - summary and then it gives them what purports to be
16 the upper confidence limit of the mean for their
17 property. Right?

18 A. That's correct.

19 (Exhibit No. 85 marked.)

20 Q. I'm going to hand you Exhibit 85.

21 MR. NIDEL: I'm sorry. I only have one,
22 Bob.

23 Q. (By Mr. Nidel) 85 is another letter signed
24 by you dated March 3rd, 2017. Is that correct?

1 A. Yes.

2 Q. It's for PPIN 4110?

3 A. Yes.

4 Q. Okay. It says, Enclosed is the Property
5 Sampling Report for your property. Analysis of soil
6 samples collected on your property indicate that
7 measured concentrations of arsenic, copper, and lead
8 are below the cleanup levels established by the NJDEP.
9 Based upon the testing results and inspection of your
10 property, soil within your property does not require
11 cleanup. Do you see that?

12 A. I do.

13 (Exhibit No. 86 marked.)

14 Q. I've handed you Exhibit 86.

15 A. Okay.

16 Q. 86 is the data provided by USMR for PPINs
17 4094 and 4110. For 4094, you see there's a sample
18 there midway down, exceeds for arsenic?

19 A. Umm.

20 Q. In the 6 to 12 range, 22.2 arsenic. Do you
21 see that?

22 A. I do.

23 Q. Okay. There's an exceedance there. Right?

24 A. There's a point source exceedance at that

1 particular sample location.

2 Q. Okay. And samples in your spreadsheets were
3 bolded when there were exceedance of the cleanup
4 standard. Correct?

5 A. I believe that to be true.

6 Q. Okay. You see a number of samples that were
7 just crossed out. So there's an exceedance tested in
8 that same location, I believe, in the next depth and
9 its 22.8, very similar, but it's crossed out. Right?

10 A. I see that.

11 Q. Okay. Why was that result crossed out?

12 A. I don't know.

13 Q. Okay. Why would you cross out a result?

14 A. I don't know. I need to understand what the
15 X qualifier indicates on the spreadsheet and I don't
16 know that answer.

17 Q. I believe the X qualifier is an OR or
18 unexpected result I think is what it was referred to.

19 A. An OR? I'm not familiar with that.

20 Q. Well, you didn't have a problem with your
21 lab. Right?

22 A. No.

23 Q. Okay. These sample results are the result of
24 sampling soil and sending it to the lab. Correct?

1 A. Yes.

2 Q. Okay. The lab results that are tabulated and
3 recorded on these spreadsheets are the results of that
4 labs results. Right?

5 A. Yes.

6 Q. Okay. You never went back to the lab and
7 said we don't trust your results or we need you to
8 correct or nullify a certain result. Right?

9 A. I think, as I mentioned yesterday, we had
10 some interaction with the lab early on to ensure that
11 their procedures were consistent with the data quality
12 objectives set up for the project, but beyond --
13 beyond that, I believe that the lab has been accurate
14 and consistent in providing the results, you know,
15 consistent with both our DQOs, data quality
16 objectives, and the lab's internal QA/QC requirements.

17 Q. Okay. So you're the project manager and you
18 can't tell me why certain data would be struck out or
19 nullified. Is that correct?

20 MR. SCHICK: Objection. Form.

21 A. That's correct. I rely on our consultants to
22 manage the sampling and data validation program,
23 entering the information into the database. I don't
24 get into that granular of detail. I rely on the

1 consultants to provide the information to me
2 consistent with the work plan and the DQO.

3 Q. (By Mr. Nidel) Okay. Does it trouble you
4 that your consultant is striking out data that your
5 lab reported to you, you have faith and trust in your
6 lab and that appears to be quite consistent with the
7 sample that was taken the same time 6 inches above it?

8 MR. SCHICK: Objection. Form.

9 A. No, it doesn't trouble me. I have confidence
10 that our consultant is adhering to their data quality
11 objectives and that the lab is also operating pursuant
12 to those.

13 Q. (By Mr. Nidel) Okay. When you send a letter
14 to the residents, do you tell them that there was
15 certain data that your consultant for one reason or
16 another struck out?

17 MR. SCHICK: Objection. Form. Asked
18 and answered.

19 A. No.

20 Q. (By Mr. Nidel) Okay. You indicate to the
21 residents that they're provided the sample data.
22 Okay. We discussed that yesterday. Right?

23 A. We discussed it yesterday.

24 Q. Yeah. What you're really providing them is

1 the upper confidence limit of the mean. Correct?

2 A. Yeah, I think we've gone through this a
3 number of times, but yes.

4 Q. Okay. And also some of that data is being
5 struck and you're just not including it in either the
6 data -- information given to the resident or the upper
7 confidence limit of the mean. So in either case
8 they're not getting that data because it's just been
9 struck out. Right?

10 MR. SCHICK: Objection. Form.

11 A. Data is only struck, in my opinion, for
12 reasons that are -- would be described in either our
13 data quality objectives or within the lab's own
14 internal QA/QC procedures. I mean, for all I know,
15 this 22.8, which you're alluding to here as being
16 struck, was struck by the lab. I don't know how and
17 why that particular number was struck, but it could
18 have very likely been that the lab, in doing its
19 internal QA/QC, determined that that was not a good
20 result for whatever reason.

21 Q. (By Mr. Nidel) Okay. But they -- they were
22 okay with the copper result and the lead result from
23 the same analysis but they had a problem with that
24 22.8 arsenic that happens to exceed the NJDEP

1 standard?

2 MR. SCHICK: Objection. Form.

3 A. That number was struck for a reason, which I
4 don't know but can probably be explained by either,
5 you know, somebody at Arcadis or somebody at the lab.

6 Q. (By Mr. Nidel) Okay.

7 A. There is a reason why a number is struck.
8 They're not just arbitrarily struck because.

9 Q. Okay. Well, let's look at 4110. Do you know
10 who owns 4110?

11 A. Pershing 26 LLC looks -- looks like the
12 owner.

13 Q. Okay. So it looks like a rental property,
14 investment property?

15 A. Could be.

16 Q. Okay.

17 A. I don't know who Pershing 26 LLC is.

18 Q. Okay. But it is a residence. Right?

19 A. I believe that to be the case.

20 Q. Okay. And if we look at the data for 4110,
21 we see, interesting, 42 parts per million arsenic in
22 the surface of the soil sampled along with 1,260 parts
23 per million lead in the surface of the soil sample,
24 but that was struck out. Right?

1 A. Yes, those two values were struck.

2 Q. Okay. But yet we have an exceedance of
3 arsenic 19.2?

4 A. I see that.

5 Q. In the surface?

6 A. Yes.

7 Q. Okay. So we have an exceedance of lead and
8 arsenic in one sample in the surface that was struck
9 out. We have another exceedance of arsenic that was
10 struck out in the surface. We have another exceedance
11 of arsenic on the back page, 23.0, that was struck
12 out. Right? Oh, no, sorry, that was not struck
13 out --

14 A. Was not --

15 Q. -- but an exceedance?

16 A. Was not struck out.

17 Q. Exactly.

18 We also have a sample of lead in that same
19 point of 400 exactly even with the New Jersey cleanup
20 standard. Correct?

21 A. It's 400, yes.

22 Q. Okay. And yet your letter to the owner of
23 that property at 26 Pershing said analysis of soil
24 samples collected on your property indicate that

1 measured concentrations of arsenic, copper and lead
2 are below the cleanup levels established by the NJDEP.
3 Right?

4 A. That's what the letter says.

5 Q. Okay. Yet they still had concentrations of
6 arsenic and potentially concentrations of lead
7 including concentrations of those contaminants on the
8 surface of their property that they were not told
9 about. Right?

10 A. They were -- they were told that the average
11 concentrations -- I don't know if you want me to read
12 this, referred to as the 95 upper confidence limit of
13 the mean is compared to the cleanup levels established
14 by the NJDEP for residential soils. That's what
15 they're told on this letter.

16 Q. Okay. They were told at open houses, they
17 were told in letters earlier to this, they were told
18 in the letters that you sent them to get them to sign
19 off on the sampling that they would be provided the
20 sample results. Correct?

21 MR. SCHICK: Objection. Form.

22 A. And these are the sample results.

23 Q. (By Mr. Nidel) Okay. Well, I'm looking at a
24 spreadsheet of the sample results and that -- were

1 they told that there were two samples very high in
2 both lead and arsenic that were struck for some reason
3 which you, the project manager, cannot tell me?

4 MR. SCHICK: Objection. Form.

5 A. No. They were provided with the 95 percent
6 UCL number.

7 Q. (By Mr. Nidel) Did that 95 percent UCL
8 number include those struck numbers?

9 A. I don't know for sure, but I don't believe
10 that they did. Those numbers were struck and likely
11 not included in the UCL calculation.

12 Q. Okay. Were they told that there were numbers
13 that were struck for one reason or another from their
14 UCL calculation that exceeded the soil cleanup
15 standard?

16 A. Not to my knowledge.

17 Q. If it was your house and you had lead or
18 arsenic above the cleanup standard -- do you have
19 children?

20 MR. SCHICK: Objection. Asked and
21 answered. We went through this yesterday.

22 MR. NIDEL: I don't think I asked if he
23 had kids.

24 MR. SCHICK: You sure did.

1 Q. (By Mr. Nidel) Do you have kids?

2 A. A stepdaughter, yes.

3 Q. Okay. I have two stepkids.

4 MR. SCHICK: Objection to sidebar.

5 Q. (By Mr. Nidel) Sorry for the sidebar. If
6 this was your house, would you want to know that you
7 had lead that exceeded the cleanup standards in
8 samples that were reported by the lab for arsenic in
9 the surface of your soil as reported by the lab?

10 MR. SCHICK: Objection. Form.

11 A. I would be comfortable knowing that the yard
12 as a whole was clean consistent with applicable
13 standards.

14 Q. (By Mr. Nidel) Would you be comfortable with
15 your stepdaughter or your wife gardening in the soil
16 where that arsenic or that lead was?

17 MR. SCHICK: Same objection.

18 A. I would be comfortable that the yard was
19 clean consistent with applicable standards.

20 Q. (By Mr. Nidel) Okay. So you would be okay
21 with your wife or your stepdaughter gardening in soil
22 that exceeded 19 parts per million arsenic or 400
23 parts mere million lead. Is that your testimony?

24 MR. SCHICK: Objection. Form.

1 A. I would be comfortable with, you know,
2 knowing that the yard was clean consistent with
3 applicable regulations.

4 Q. (By Mr. Nidel) Okay. So you wouldn't want
5 to know where there were exceedances on your property
6 even though the property was according to a consultant
7 told you that it was clean consistent with New Jersey
8 standards; you wouldn't want to know where there was
9 lead and arsenic detected at concentrations above
10 those standards?

11 MR. SCHICK: Same objection.

12 A. I'm comfortable with the knowledge that the
13 yard is clean consistent with applicable regulations.

14 Q. (By Mr. Nidel) Okay. What if the yard was
15 in another state that had different regulations, would
16 you then be only comfortable if you met those
17 regulations?

18 MR. SCHICK: Objection. Form.

19 A. Ask that again, please.

20 Q. (By Mr. Nidel) Okay. Well, what if a State
21 required that you clean up all hits above a cleanup
22 standards, would -- and you lived in that state and
23 you had these results and it was cleaned up, would you
24 then be comfortable because those regulations were

1 followed?

2 MR. SCHICK: Objection. Form.

3 A. I'm relying on the State to develop and
4 implement regulations that protect the health of its
5 citizens and, you know, if there was a different
6 jurisdiction where I was in, I would expect that the
7 yard be cleaned to the applicable standards in that
8 state. I mean, I don't think it's appropriate, you
9 know, to compare one jurisdiction to another. We're
10 in New Jersey. These properties are being cleaned
11 consistent with New Jersey regulations and that's what
12 we're doing.

13 Q. (By Mr. Nidel) Is it your job in cleaning up
14 the neighborhood to clean up the properties so that
15 they can be used across the property safely?

16 MR. SCHICK: Objection. Form.

17 A. We are cleaning up those properties to levels
18 where the upper confidence limit is less than the
19 applicable standard.

20 Q. (By Mr. Nidel) Is it your job to clean up
21 these properties so that they can have an unrestricted
22 residential use?

23 MR. SCHICK: Objection. Form.

24 A. The properties are being cleaned up

1 consistent with the applicable regulations.

2 Q. (By Mr. Nidel) You cannot answer the
3 question that your goal is to clean up these
4 properties so that they can be safely used in an
5 unrestricted way?

6 MR. SCHICK: Objection. Form.

7 Q. (By Mr. Nidel) Period?

8 A. It's -- it's my understanding that by
9 cleaning up properties so that the 95 percent UCL is
10 less than the applicable standard represents an
11 unrestricted use.

12 Q. Okay. Would someone like the people that we
13 just looked at who have lead and/or arsenic in the
14 surface soil above a New Jersey cleanup standard,
15 would they be required to disclose that when they sell
16 their property?

17 MR. SCHICK: Objection. Form. Beyond
18 the scope.

19 Q. (By Mr. Nidel) Do you know?

20 A. I'm not a Realtor.

21 Q. Do you know if they'd be required to disclose
22 that?

23 MR. SCHICK: Objection. Form. Asked
24 and answered.

1 A. I just said I'm not a Realtor. I have no
2 reason to know what the requirements in New Jersey
3 would be.

4 Q. (By Mr. Nidel) Okay. So your -- your job as
5 project manager cleaning up the neighborhood for
6 contamination that might be related to your company's
7 operations, you didn't engage to understand what these
8 people would have to go through if they had this
9 property on their site and they were aware of it,
10 whether they had to disclose that? I understand
11 you're not a Realtor, but you didn't look into whether
12 or not they would have to make a disclosure when they
13 sold their property if you gave them a result or
14 didn't give them a result or they had a lab that
15 tested their property at your direction and that led
16 to a certain result? You didn't look into that?

17 MR. SCHICK: Objection. Form.

18 A. Not to my knowledge.

19 (Exhibit No. 87 marked.)

20 Q. (By Mr. Nidel) I hand you Exhibit 87 to your
21 deposition. Exhibit 87 is a property, PPIN 7355, and
22 it is -- it is at the northernmost tip of the northern
23 transect. Okay?

24 A. Northernmost tip of the -- okay.

1 Q. Okay. So it's one of the farthest samples
2 north.

3 A. Of the central transect or --

4 Q. I would say the -- I would -- I'm going to
5 call them west, northwest, and north even though I
6 agree they're more --

7 A. Okay. So -- okay. So this would be the
8 northwest one?

9 Q. This is the north one.

10 A. The north one. Okay.

11 Q. Okay. But it's Parcel 7355.

12 A. Okay.

13 Q. And it's at the extreme of its transect.
14 Okay?

15 A. Yes.

16 Q. It's got -- this is from, again, the TIA
17 database and the TIA database shows the locations
18 where the samples were taken from. Correct?

19 A. That's what it appears.

20 Q. I mean, that's what the -- that's one of the
21 features of the TIA database. Correct?

22 A. Uh-huh.

23 Q. Okay. And we see those locations four in the
24 backyard and then one, two, three, four, five -- six

1 in the side yard. Correct?

2 A. Yeah, I'm not sure if the four are in the
3 back yard or the front yard because it looks like
4 there's parking behind there.

5 Q. Okay. Fair enough.

6 A. It's in -- it's in two separate areas.

7 Q. Okay. None of those samples are taken
8 directly adjacent to the side of the home or the drip
9 line. Correct?

10 A. That's correct.

11 Q. That was your protocol, was to avoid those
12 locations. Right?

13 A. Yes.

14 Q. And all of those samples -- all of those
15 locations indicate an exceedance of at least one
16 contaminant. Correct?

17 A. They're red. I'm not sure which contaminant
18 they're referring to, but that would indicate an
19 exceedance of something.

20 (Exhibit No. 88 marked.)

21 Q. Hand you Exhibit 88. Exhibit 88 is the data
22 and some notes for this property 7355. Okay?

23 A. (No response.)

24 Q. Exported from the TIA database.

1 A. Yeah. I'm just looking at it. Give me a
2 second. Okay.

3 Q. Okay. Well, you see the data. There's
4 almost every location, every depth. Almost every
5 depth of arsenic is exceeded, including a high of 61
6 actually in the surface soil sample. Lead is exceeded
7 almost across the board with some extremely high
8 levels above 2,000 in the surface soil. Do you see
9 that?

10 A. I do.

11 Q. When were these samples collected?

12 A. It looks like June of 2017.

13 Q. Okay. So I think your letter said that when
14 the samples were collected that you would get the
15 results in six to eight weeks. I think that's what
16 your letter said. We talked yesterday and you said a
17 couple of months. So somewhere in the August time
18 frame you would have gotten these results. Right?

19 A. Generally, yes.

20 Q. Okay. Have you told the people living in
21 7355 that they've got levels above 1,200 and levels
22 above 30 for lead and arsenic respectively?

23 A. I believe those communications have occurred,
24 but I can't say for sure.

1 Q. What would those communications have been?
2 Would they have been a letter?

3 A. It would have been a sampling report similar
4 to the ones you provided me with earlier.

5 Q. So they would have been given a sampling
6 report that --

7 A. I believe that's the case, but I can't be
8 positive.

9 Q. Okay. Well, these people were given the
10 sample results of their testing?

11 A. I don't recall.

12 Q. Were they given the results or were they
13 given the upper confidence limit of the mean or you
14 don't know?

15 A. I don't know. If they would have been given
16 anything, it would have been the upper confidence
17 limit.

18 Q. Okay. They would not have been given the
19 sample results. Correct?

20 A. No.

21 MR. SCHICK: Objection. Form.

22 Q. (By Mr. Nidel) They would not have been
23 given the locations of the samples. Correct?

24 A. Correct.

1 Q. Would you agree with me that that property
2 there, 7355, is not safe for all uses?

3 MR. SCHICK: Objection. Form.

4 A. I would agree that there are lead and arsenic
5 concentrations that are, just looking at them, likely
6 above the 95 percent UCL.

7 Q. (By Mr. Nidel) Okay. Would you agree that
8 that property is not fit for unrestricted residential
9 use?

10 MR. SCHICK: Objection. Form.

11 A. That property does have lead and arsenic in
12 excess of the regulatory standard.

13 Q. (By Mr. Nidel) Does that mean it's not fit
14 for unrestricted use?

15 MR. SCHICK: Objection. Form.

16 A. I'm not sure what you mean by fit for
17 unrestricted use. It likely exceeds the 95 percent
18 UCL.

19 Q. (By Mr. Nidel) Then it certainly exceeds the
20 New Jersey cleanup standard. Right?

21 MR. SCHICK: Objection. Form.

22 A. The New Jersey cleanup standard at a 95
23 percent UCL.

24 Q. (By Mr. Nidel) Well, it certainly exceeds

1 the cleanup standard as it is provided by the State of
2 New Jersey. Right?

3 A. Yes.

4 Q. Okay. Would you agree that independent of
5 attribution that that property is impaired?

6 A. That property has concentrations of arsenic
7 and lead in excess of the New Jersey standard.

8 Q. And it needs to be cleaned up before it can
9 be used in an unrestricted way. Correct?

10 MR. SCHICK: Objection. Form.

11 A. I don't know.

12 Q. (By Mr. Nidel) You don't know? You don't
13 know if that needs to be cleaned up before it can be
14 used in a safe and unrestricted way?

15 MR. SCHICK: Objection. Form.

16 A. Based on those sampling results, if this were
17 a property within the AOC, the recommendation of the
18 company would be that that property be cleaned up.

19 Q. (By Mr. Nidel) Okay. And you're aware of
20 discussion, because you were involved in these
21 discussions, where properties above 1,200 in the
22 surface, particularly if they had kids, but that they
23 should be cleaned up, you know, essentially as soon as
24 possible. Right?

1 A. The Tier 1 priorities would be by definition
2 the ones prioritized for cleanup.

3 Q. And that's because those properties are
4 thought to be the most unsafe. Right?

5 MR. SCHICK: Objection. Form. Asked
6 and answered yesterday.

7 A. Yeah. I think I've -- I think I've answered
8 that already.

9 Q. (By Mr. Nidel) The reason you would clean up
10 a property with lead above 1,200 that may have
11 children is because it's the most likely to cause
12 harm?

13 MR. SCHICK: Objection. Form.

14 A. A property above 1,200 would be prioritized
15 for cleanup as compared to properties with lower
16 concentrations.

17 Q. (By Mr. Nidel) Do you prioritize for cleanup
18 properties that are less likely to cause harm?

19 MR. SCHICK: Objection. Form.

20 A. I don't understand the question.

21 Q. (By Mr. Nidel) I don't understand your
22 answer because my question was is it prioritized for
23 cleanup because it's more likely to cause harm and you
24 just said it would be prioritized for cleanup. So is

1 it -- are you setting priorities based on what is
2 likely to cause the most harm and then working back,
3 yes or no?

4 MR. SCHICK: Objection. Form.

5 A. We set our priorities based on the regulatory
6 guidance and if there's -- if a property qualifies as
7 a Tier 1 property, it's prioritized for cleanup. If
8 it's not a Tier 1 property it has a lower priority.

9 Q. (By Mr. Nidel) Okay. Yesterday we spoke
10 about the cleanup standards and it was your testimony
11 that below 399 -- sorry -- at 399 there was no risk
12 and at 401 there was a risk. Right?

13 MR. SCHICK: Objection. Form.
14 Misstates the testimony.

15 A. 399 is below the regulatory standard, 401 is
16 above the regulatory standard.

17 Q. (By Mr. Nidel) And those -- go ahead.

18 A. You go ahead.

19 Q. And those are risk-based standards. Right?

20 MR. SCHICK: Objection. Form.

21 A. It's my understanding that there are -- that
22 the New Jersey standards are risk based and human
23 health based.

24 Q. (By Mr. Nidel) Okay. So in order to

1 protect -- to minimize risk and/or protect human
2 health, that property should be cleaned up. Correct?

3 MR. SCHICK: Objection. Form.

4 A. Again, based purely on those numbers, if that
5 property was within the AOC, USMR would recommend that
6 it be cleaned up and would still be up to the resident
7 to allow that.

8 Q. (By Mr. Nidel) And USMR is not going to
9 clean up that property at this stage. There's no
10 plans to clean up that property. Right?

11 A. At this point it's outside of the AOC and we
12 have no plans to clean that property.

13 (Exhibit No. 89 marked.)

14 Q. Okay. Exhibit 89 is another letter signed by
15 you sent December 8, 2016. Right?

16 A. Yes.

17 Q. Okay. This letter is different than the
18 other letters that we saw in that it gives some -- in
19 accordance with the Remedial Action Work Plan, and
20 then it describes depth interval UCLMs. Do you see
21 that?

22 A. I do.

23 Q. And remediation UCLMs. Right?

24 A. I do.

1 Q. I was asking why the language in this letter
2 changed or if it changed and you -- I don't think you
3 could recall specific changes. I'm giving you an
4 example here. We've looked at other examples.
5 Essentially this is a letter that has the same
6 paragraph in it, second-to-the-last paragraph, that
7 says, As described in the Sampling Report, the results
8 of the Remediation UCLM for the soil on your property
9 indicate measured concentrations of arsenic, copper,
10 and lead are below the cleanup level established by
11 the NJDEP. Do you see that?

12 A. Yes.

13 Q. Okay. So now it's a little different
14 actually. It says -- it adds the word remediation
15 UCLM in there. Okay?

16 A. Uh-huh.

17 Q. And it adds this description above of what
18 these UCLMs are. Okay. Do you see that?

19 A. Umm.

20 Q. No. 1 and 2 describing what the UCLMs are?

21 A. Yeah, I do see that.

22 Q. Okay. Why was this provided to this property
23 owner?

24 A. I don't recall why the language was modified.

1 Q. Okay. Well, this letter is December of 2016
2 and there's letters we looked at that are after this
3 letter that don't have that language in them. What
4 exhibit are you looking at?

5 A. I'm just leafing through 85 here, looking at
6 some of the other ones you've provided me with.

7 Q. These people got a two-pager versus the
8 one-pager that you sent out to other folks. Right?

9 A. Okay. What's -- what's the question?

10 Q. Why did this -- why did these folks get a
11 two-pager versus a one-pager?

12 A. I don't know.

13 Q. Why did the folks that got a one-pager get a
14 one-pager and not the two-pager?

15 A. I don't know.

16 Q. Okay. You're the project man -- this is your
17 project. This is your communication with those folks
18 that you got ambassadors to get you -- to sign up with
19 you and have placed their trust in you.

20 A. Uh-huh.

21 Q. And some of them are getting different
22 information about their results than others and can
23 you tell me why?

24 A. I don't recall. Sorry.

1 Q. Did you talk to Arcadis about this?

2 A. I don't recall talking to Arcadis about this.

3 Q. Okay. Does this trouble you?

4 A. No, it doesn't.

5 Q. Okay. Well, does it trouble you that if we
6 look at the results that the depth interval confidence
7 limits of the mean actually have an exceedance of
8 lead, 560 parts per million?

9 A. I mean, what's -- what's the question?

10 Q. Yeah. Does it trouble you that this property
11 actually exceeds the lead cleanup standard as defined
12 by your work plan at the depth interval of 6 to 12
13 inches for lead?

14 A. I need to take some time to look at this.

15 Q. Okay. We can go off the record.

16 MR. NIDEL: Go off the record.

17 THE VIDEOGRAPHER: We are off. It's

18 12:08 p.m.

19 (Break.)

20 THE VIDEOGRAPHER: We are back on the
21 record. It is 12:09 and it's the continuation of Tape
22 9.

23 Q. (By Mr. Nidel) Go ahead.

24 A. Again, yeah, I -- I think that Ms. Szegedi

1 can probably provide a lot more clarity as to exactly
2 why, but I think you referred me to a spreadsheet.
3 This would be Exhibit 83 on how the determination on
4 whether or not to do remediation is based. For
5 purposes of delineation, yes, there is an exceedance
6 of lead at that one interval at 6 to 12 inches. But
7 then as you can see on here, the way the remediation
8 UCL is calculated, it incorporates the additional
9 values that are below the most contaminated interval.
10 So if you go down to the bottom part of the table that
11 says remediation UCLMs, the actual lead UCL is 362.
12 So I believe that's the number that is used to
13 determine that remediation is not required, but,
14 again, Ms. Szegedi can probably confirm that.

15 Q. Okay. I really -- I mean, I probably would
16 enjoy talking to Lisa, but I'm confused because your
17 letter that you sent these people, including I would
18 assume your letter went out to 38 Union Street, said
19 you'll get copies of the sample results and if the
20 samples exceed the New Jersey cleanup standard your
21 property will be cleaned up at no charge to you.
22 Right?

23 A. You're paraphrasing but that's generally
24 accurate.

1 Q. Okay. But that's not what you're doing to
2 these people. Right?

3 MR. SCHICK: Objection. Form.

4 A. Now, again, we are -- we are remediating
5 properties consistent with the remedial action work
6 plan, the requirements of the State as approved by the
7 LSRP.

8 Q. (By Mr. Nidel) Are you remediating
9 properties consistent with your letters to these
10 people?

11 A. I believe we are.

12 Q. You believe you are?

13 A. Yes.

14 Q. How is it consistent with your letter that
15 said substantively, No. 1, you will get your sample
16 results; No. 2, if those results exceed the New Jersey
17 DEP cleanup standard for any contaminant that
18 contaminant will be cleaned up. This person at 38
19 Union Street not only has lead but has lead that
20 exceeds the upper confidence limit of the mean at 560
21 parts per million and yet that contamination for them
22 identified by you is not being cleaned up?

23 MR. SCHICK: Objection. Form.

24 A. Again, I mean, the remediation UCLM on this

1 document indicates that the lead ppm is 362 and does
2 not according to the protocols require remediation.

3 Q. (By Mr. Nidel) According to your letter,
4 does it require remediation?

5 A. Ask that again, please.

6 Q. According to what you told people in your
7 letter, does it require remediation?

8 A. According to this letter, no.

9 Q. No, not that letter. The letters that you
10 sent them, that you showed them, and the brochures at
11 the happy hour, the open house, the other letters you
12 sent them, the ad you put in the newspaper, remember
13 that one, is it consistent with that?

14 MR. SCHICK: Objection. Form.

15 A. I believe everything we've done and said is
16 consistent with what we said we're going to do in our
17 remedial action work plan and is consistent with the
18 tech regs.

19 Q. (By Mr. Nidel) I'm asking if it's consistent
20 with what you told the public through your
21 ambassadors, through your letters, through your open
22 houses?

23 A. I believe everything we've done is consistent
24 with what we've told the public in that we will clean

1 properties consistent with the regulations that are
2 applicable and our remedial action work plan.

3 Q. Okay. You agree with me that your letters, I
4 will paraphrase, say if we identify contamination
5 above the New Jersey soil cleanup standard we will
6 remediate it at no cost to you?

7 A. Consistent with the requirements of our
8 remedial action work plan.

9 Q. Your letter says that?

10 A. No. Our letter doesn't specifically say
11 that, but our obligation to the State and to the LSRP
12 is compliance with the remedial action work plan,
13 which we've been doing.

14 Q. Okay. And the difference for these people in
15 that specifically not saying that is that some of them
16 continue to have lead and arsenic on their property
17 that exceeds the New Jersey soil cleanup standard
18 including some that's above the zero to 6-inch level
19 there. Right?

20 MR. SCHICK: Objection. Form.

21 A. Those properties with concentrations above
22 the cleanup standard at a 95 percent UCL are cleaned
23 up consistent with the applicable regulations in our
24 work plan.

1 Q. (By Mr. Nidel) Well, this one's not.

2 MR. SCHICK: Objection. Form.

3 Q. (By Mr. Nidel) This one is not.

4 MR. SCHICK: Same objection.

5 Q. (By Mr. Nidel) Louis and Alice Delgado, not
6 happening for them. Right?

7 A. I think if you read Paragraph 2 it will
8 explain that the remediation UCL is what is used to
9 determine the need to perform remediation at the
10 property.

11 Q. In a plan you wrote. Right?

12 A. In a plan that we wrote that's consistent
13 with New Jersey tech regs.

14 Q. Okay. Have you met the Delgados?

15 A. I have not.

16 Q. Okay. How many kids do the Delgados have?

17 A. I do not know.

18 Q. Okay. Do the kids play in the yard?

19 A. I don't know.

20 Q. Does Alice, does she garden?

21 A. I don't know.

22 Q. Have they put in a basketball hoop?

23 A. I don't know.

24 Q. Are they planning to dig out their backyard

1 and put a fire pit in?

2 A. I've never had any contact with the Delgados
3 so probably the answer to that question and any other
4 pertaining to them is no.

5 Q. Okay. If the goal is to create unrestricted
6 use of these people's property, would it be important
7 to know some of these details --

8 MR. SCHICK: Objection. Form.

9 Q. (By Mr. Nidel) -- about how they might use
10 their property?

11 A. The goal of the program is to remediate soil
12 in excess of standards consistent with the regulatory
13 requirements and that's what's being done.

14 Q. Okay. So you don't need to know these
15 details. Right?

16 A. I don't think we need to know those details.

17 Q. It doesn't matter; you're just applying a
18 plan and that plan is consistent with your remedial
19 action work plan. Right?

20 A. We're implementing our remedial action work
21 plan.

22 Q. Okay. Does it matter to you how many
23 bedrooms the house has?

24 MR. SCHICK: Objection. Form.

1 Q. (By Mr. Nidel) In terms of your approach to
2 each property?

3 A. No.

4 Q. Okay.

5 MR. NIDEL: Let's go ahead and take a
6 break then.

7 THE VIDEOGRAPHER: We are off the
8 record. It is 12:18 and it's the end of Tape 9.

9 (Lunch recess.)

10 THE VIDEOGRAPHER: Okay. We are back on
11 the record. It is 1:10 p.m. and this is the beginning
12 of Tape 10.

13 Q. (By Mr. Nidel) The conceptual site model was
14 basically -- it was centered around air deposition of
15 contaminants from the site. Right?

16 A. That's -- that's the basis for the conceptual
17 air model -- conceptual site model, yes.

18 Q. Okay. Did that air deposition lead to any
19 contaminants inside homes?

20 A. I don't know.

21 Q. Okay. You never did any testing inside the
22 homes?

23 A. We've not done any interior testing.

24 Q. Okay. Do you plan to do any interior --

1 interior testing?

2 A. I believe we intend to offer interior
3 cleaning to residents whose properties we have
4 remediated.

5 Q. Okay. That would be to address dirt and
6 debris that was associated with the remediation
7 process. Right?

8 MR. SCHICK: Objection. Form.

9 A. Can you say that again?

10 Q. (By Mr. Nidel) What's the purpose of that
11 cleanup that you're offering to people that have had
12 remediation?

13 A. I think the theory is that if there was a
14 property that required remediation on the outside of
15 the property there may have been throughout the course
16 of time some of that material brought into the house
17 and we're offering people whose yards have been
18 remediated that interior cleaning service.

19 Q. And just to be clear, throughout the course
20 of the time of the remediation. Correct?

21 MR. SCHICK: Objection. Form.

22 Q. (By Mr. Nidel) You said throughout the
23 course of time there may have been dirt that was
24 brought into the house.

1 A. I don't think -- say that again. I mean. . .

2 Q. I'm just trying to understand. You're
3 offering it to people that had remediation done.
4 Right?

5 A. Correct.

6 Q. And your testimony was that throughout the
7 course of time there may have been dirt that was
8 brought into the house and I'm asking you to clarify
9 what you mean throughout the course of the time. You
10 mean the last --

11 A. Both before -- both prior to remediation and,
12 you know, while remediation was ongoing. Not
13 necessarily dirt that may have gone into a residence
14 as a result of our remediation activities.

15 Q. Okay. How is that cleaning going to take
16 place?

17 A. I don't know the specifics. I mean,
18 typically it would be dusting and vacuuming with a
19 HEPA-type vacuum cleaner to ensure that the house was
20 thoroughly cleaned inside. It would be really --
21 really at the discretion of the homeowner on exactly
22 what we do because it's -- we're going into somebody's
23 house and if you don't want us to clean that china
24 cabinet we're not going to clean that china cabinet

1 but we're going to make that service available.

2 Q. How have you communicated that to the
3 community?

4 A. I'm not sure.

5 Q. Have you communicated it to the community?

6 A. I don't know.

7 Q. Do you know -- you're managing the project.
8 You don't know if you've told people that they're
9 going to have this option yet?

10 A. I don't recall if we've had that -- that
11 specific communication yet with people.

12 Q. Okay. And you have not communicated yet with
13 the people that if they were -- if they received
14 remediation that they could get some type of cleanup
15 of the interior of their house. Is that correct?

16 A. I can't recall whether we've made that
17 communication yet or not, but it's the intent of the
18 company to do -- to offer interior cleaning on those
19 properties where we've done remediation.

20 Q. Okay. You would send the letter that would
21 notify the residents. Right?

22 A. It would go out under my signature.

23 Q. Okay. And that letter has not gone out yet.
24 Correct?

1 A. To my knowledge it's not.

2 Q. Okay. Are you offering any kind of interior
3 cleaning -- well, strike that.

4 You have not done any interior sampling of
5 any properties. Correct?

6 A. That's correct.

7 Q. Okay. And you do not offer -- you do not
8 intend to offer any interior cleaning of any
9 properties other than those that you've done
10 remediation at. Correct?

11 A. Yes, that's correct.

12 Q. Okay. After you do the interior cleaning
13 that you plan to offer if anyone accepts the offer, do
14 you plan to do any testing to confirm the results of
15 that cleaning?

16 A. I don't believe so.

17 Q. Did you do any groundwater sampling in the
18 neighborhood?

19 A. Not that I'm aware of. We've done
20 groundwater sampling on the onsite, but I don't
21 believe we've done any offsite groundwater sampling.

22 Q. Why is it that you would do onsite
23 groundwater sampling and not offsite?

24 A. We were required to do groundwater sampling

1 onsite as a requirement of the remedial investigation
2 that was done in the late '80s.

3 Q. Why have you not done any offsite groundwater
4 sampling?

5 MR. SCHICK: Excuse me. Objection.
6 This is outside the scope and unless our agreement has
7 gone the way of the wind, we weren't -- I mean, your
8 notice specifically says you're asking about the
9 offsite soils program outside the boundaries of your
10 facility excluding Arthur Kill sediment and
11 groundwater outside the proposed class area.

12 MR. GERMAN: It doesn't say outside the
13 proposed class area.

14 MR. SCHICK: It does say outside the
15 proposed class area.

16 MR. GERMAN: Isn't that the -- I mean,
17 isn't that the --

18 MR. SCHICK: That's not what I
19 understood.

20 MR. NIDEL: It's excluding groundwater
21 in Arthur Kill that -- sampling that was done outside
22 the class area.

23 MR. GERMAN: That's right.

24 MR. NIDEL: So inside the class area.

1 But in any event, as a fact witness he can answer the
2 question as to whether or not or why they have not
3 done, if he knows, any groundwater sampling.

4 A. To my knowledge we've not done groundwater
5 sampling. In the LSRP's review of our various work
6 plans that issue was not raised, to my knowledge.

7 Q. (By Mr. Nidel) Did you do a conceptual site
8 model for groundwater contamination in the
9 neighborhood?

10 A. The conceptual site model is based on air
11 deposition. It's not based on groundwater impacts.

12 (Exhibit No. 90 marked.)

13 Q. Hand you Exhibit 90 in the case. Exhibit 90
14 is sample results for PPIN 1036 and then there is --
15 from the TIA database there is a screenshot of the
16 sample locations for 1036. It's a little hard to
17 read, but it's the central parcel there. Do you see
18 that?

19 A. I do.

20 Q. Okay. And you see the sample exceedances at
21 the red locations and the clean samples at the green
22 locations?

23 A. Yes.

24 Q. Okay. Again, if you look at the numerical

1 results we have a number of samples including a lead
2 sample of I think it was 1,400 that's crossed out,
3 some arsenic samples that are crossed out. But you
4 don't know why those samples were -- those sample
5 results were disregarded. Correct?

6 A. I do not know why they were disregarded.

7 (Exhibit No. 91 marked.)

8 Q. Okay. I'm going to hand you another exhibit.
9 Exhibit 91 -- Exhibit 91 is a figure from your
10 database for PPIN -- PPIN 1036 showing the remedial
11 areas. It's the proposed excavation area. Is that
12 correct?

13 A. It's kind of hard to read, but. . .

14 Q. Top right it says the proposed excavation
15 area?

16 A. Yeah, but I'm trying to see where -- I mean,
17 what -- what are the areas that are proposed. I'm not
18 seeing how that's communicated, I mean, or is it these
19 lighter colored areas.

20 Q. They're shaded, I believe, on the parcel
21 there.

22 A. B01-6, B01-6 and B01-6?

23 Q. That's what it appears to me. Is that what
24 it appears to you? This is your project.

1 A. Well, I --

2 MR. SCHICK: Objection. Form.

3 A. It's not the best quality drawing, so --

4 Q. (By Mr. Nidel) I will concede that. That's
5 apparently the toner was running low.

6 A. Okay.

7 Q. But do you agree that this is typical that
8 that represents the excavation area or do you not
9 agree with that?

10 A. That's -- that's what it appears to be, yeah.

11 Q. Okay. If you look back to Exhibit -- I guess
12 it was 90 you see that there are two sample locations,
13 for example, just to the right of the 1036, one a
14 little bit further to the top of the page and one
15 further down. So two samples locations that bound
16 that 1036?

17 A. Can you point out?

18 Q. I can. 1036 and then one above and one below
19 to the right.

20 A. Uh-huh. Got it.

21 Q. It looks like certainly the one below is not
22 captured by that excavation. The one above may or may
23 not be. Is that correct?

24 A. Based on this plan that would be correct.

1 Q. When you do an excavation, for example, the
2 bottom within the parcel, the bottom -- bottommost
3 right sample that exceeds, so this guy right here
4 (indicating)?

5 A. Uh-huh.

6 Q. I don't -- I can't tell if that's in that
7 remediation or not, but you would agree with me that
8 if it's in the remediation, which I would -- or in
9 the -- yeah, in the excavation zone it's right at the
10 edge of that excavation zone. Is that correct?

11 A. I think that's generally correct, yes.

12 Q. Okay. Was there -- is there a -- the only
13 thing I can think of is Steve's basal cell.

14 MR. NIDEL: Sorry. That's on the
15 record.

16 Q. (By Mr. Nidel) Is there an amount that you
17 go beyond an exceedance to capture any lead or arsenic
18 that might be in that soil or do you just as long as
19 you get the sample location itself, your work plan is
20 covered?

21 MR. SCHICK: Objection. Sidebar.

22 A. As I understand it, the excavation areas
23 prescribed by some sort of a polygon developed around
24 a particular sample area that is either going to be

1 excavated or not. How that's drawn specifically in
2 each example, I don't know those details. That's, you
3 know, probably an Arcadis question.

4 Q. (By Mr. Nidel) Okay. Is there a buffer that
5 is required by your plan as to how much away -- how
6 much beyond a sample exceedance that you need to go to
7 pick up anything that might be associated with that
8 exceedance?

9 A. I don't know.

10 Q. You don't know if there is or there is not.
11 Correct?

12 A. Correct.

13 (Exhibit No. 92 marked.)

14 Q. I've handed you Exhibit 92. It's another
15 remedial UCLM summary for 23 Warren Street. Does that
16 look correct?

17 A. It does.

18 Q. Okay. Does Arcadis prepare these
19 spreadsheets?

20 A. Yes.

21 Q. Okay. Without going into the same detail as
22 before, if we look down at the post-remediation I'm
23 trying to understand why there is -- why there are
24 these dashes, right, so where it looks like there

1 maybe have been cleanup, 1036, the first zero to 6
2 arsenic, there's just a dash there.

3 A. Yeah, I see the dash.

4 Q. Okay. It says that no backfill was supplied
5 at property, therefore, back -- at owner's request
6 backfill value was not substituted. So do you know
7 what that circumstance would have been?

8 A. It's my understanding that some residents did
9 not want their property backfilled for whatever
10 reason. They may have had other plans to install
11 something or other in the remediated area, so at the
12 property owner's request we didn't backfill in certain
13 locations for certain properties.

14 Q. Okay. And again, not to continue to -- well,
15 this gives us another example of where even
16 post-remediation there is still arsenic in the soil
17 above the cleanup standard as well as lead. Correct?

18 A. There -- yeah, there are certain points that
19 exceed the standards in the -- in this case in a 6 to
20 12 and the 12 to 18-inch intervals.

21 (Exhibit No. 93 marked.)

22 Q. Hand you Exhibit 93. Exhibit 93 is
23 analytical soil data summary for 23 Warren Street.

24 MR. SCHICK: Hang on a minute. Did you

1 give me --

2 MR. NIDEL: Is that what I gave you?

3 MR. SCHICK: -- two?

4 MR. NIDEL: Maybe I'm just --

5 MR. SCHICK: Can I take a look?

6 MR. NIDEL: I might have --

7 MR. SCHICK: You may have had an extra
8 copy. I just want to make sure, yeah.

9 MR. NIDEL: I appreciate the check on
10 that.

11 MR. SCHICK: Okay. There you go.

12 MR. NIDEL: George can get one. First
13 time, huh?

14 MR. WILKINSON: Wow.

15 MR. NIDEL: Never too late.

16 Q. (By Mr. Nidel) Exhibit 93 is analytical
17 data -- soil data summary for 23 Warren Street. Is
18 that correct?

19 A. Yes.

20 Q. Okay. And in some of the data we can see,
21 for example, down midway through the page G1-05.
22 There are some ORs for arsenic, there's an OR and then
23 in the next location there's an OR for arsenic. Do
24 you see those?

1 A. I see the ORs, yes.

2 Q. Okay. And then if you -- if we use our key,
3 7, OR - indicates an "outlier," quote, data point was
4 removed.

5 A. Okay.

6 Q. Okay. Do you know what that OR means?

7 A. I believe it means what the notes say, that
8 was an outlier data point was removed.

9 Q. Do you understand why that outlier was
10 removed?

11 A. That would be a determination that the
12 statistician made that it was a data outlier.

13 Q. Okay. I'm trying to understand from a, I
14 don't know, a technical standpoint. They didn't
15 remove the copper and the lead number, so they didn't
16 disregard the entire sample, but they're saying for
17 some reason that at 6 to 12 inches deep the arsenic
18 number they didn't agree with. And I'm trying to
19 understand why that decision would be made by someone?

20 MR. SCHICK: Objection. Form.

21 A. I don't get involved in the determinations
22 that the statistician uses to eliminate outliers or
23 not. That's up to the statistician to make that
24 determination and it appears in this case that the

1 statistician determined that it was an outlier and it
2 was removed.

3 Q. (By Mr. Nidel) Okay. So this removing of a
4 number that you can't explain, that's consistent with
5 your cleanup plan?

6 A. Repeat that.

7 Q. You can't explain to me why these numbers
8 were removed. Right?

9 A. Not specifically.

10 Q. Okay.

11 A. You know, they were removed by the
12 statistician using his professional expertise that
13 number was an outlier and, you know, shouldn't be
14 included in further calculations. I think that's an
15 approach that's permissible under the regulations and
16 found to be approvable by the LSRP.

17 Q. What is his expertise to make this call?

18 A. He's a -- I'm sure he's a professional
19 statistician.

20 Q. So it's your testimony that some statistical
21 anomaly in that -- not the whole sample but just the
22 arsenic numbers there caused them to be disregarded?

23 MR. SCHICK: Objection. Form.

24 A. It was the opinion of the statistician that

1 that sample was an outlier and was disregarded.

2 Q. (By Mr. Nidel) And you're not sure if that
3 was based on statistics or something from the lab or
4 anything else. Right?

5 A. I'm relying on the expertise of the
6 statistician and that was his or her opinion.

7 Q. Okay. And that process is consistent with
8 your project?

9 A. Yes.

10 (Exhibit No. 94 marked.)

11 Q. Okay. Hand you Exhibit 94 to your
12 deposition. Exhibit 94 is a spreadsheet that was
13 produced by USMR. It's actually a remediation UCL
14 summary for 25 Salem Avenue, Carteret, New Jersey.
15 It's cut off by a note on the spreadsheet.

16 A. Okay.

17 Q. Who prepares these spreadsheets?

18 A. They're prepared by Arcadis.

19 Q. Okay. The note says, I still find this table
20 confusing because we provide data for three depth
21 intervals and provide only one UCLM. Because the UCLM
22 is the only relevant cleanup criterion, recommend
23 reconsidering removing footnote 5 and bolded results.
24 Do you see that?

1 A. I see what it says.

2 Q. Okay. David Wallis didn't want the results
3 that exceeded the New Jersey cleanup standard to be
4 highlighted anymore. Correct?

5 MR. SCHICK: Objection. Form.

6 A. I can't speak to what Mr. Wallis was
7 specifically thinking.

8 Q. (By Mr. Nidel) Okay. These are the
9 tables -- these spreadsheets provide the tables that
10 are used in the letters that go out to the clients.
11 Correct? Sorry, that go out to the residents.
12 Correct?

13 A. That's correct.

14 Q. Okay. And you don't agree with me that David
15 Wallis no longer wanted the bolding to highlight those
16 numbers that were above the cleanup standards?

17 A. I think Mr. Wallis's, you know, comment here
18 speaks for itself. I can't tell you what he had --
19 precisely what he may or may not have been thinking.

20 Q. Okay. You -- your letter said, and again
21 I'll paraphrase, that values that exceed the New
22 Jersey cleanup standards will be remediated at no cost
23 to you. Right?

24 A. That's generally what the letter says.

1 Q. Okay. And we've gone back and forth about
2 what values that exceed the New Jersey cleanup
3 standard means because as your testimony today that
4 that means if it exceeds the upper confidence limit of
5 the mean. Correct?

6 A. That's generally correct, yes.

7 Q. Okay. If we look at footnote 5 it says, Bold
8 text indicates values that exceed NJRDCSRS. Do you
9 see that?

10 A. I do.

11 Q. Okay. So in fact, what is NJRDCSRS?

12 A. I believe it's New Jersey Residential Direct
13 Contact Soil Remediation Standard, if I know my
14 acronym correctly.

15 Q. Okay. That's what we've been calling the
16 cleanup standards?

17 A. Generally, yes.

18 Q. Okay. Those are the standards that apply to
19 the site and those are the standards referenced to the
20 residents. Correct?

21 A. Those are the -- those are the cleanup
22 standards.

23 Q. Okay. And those are the standards that in
24 these spreadsheets when highlighted in bold indicate

1 that they're exceeded. Correct?

2 A. The bold ones on this spreadsheet indicate a
3 point source exceedance of the applicable standards.

4 Q. Okay. So bold text indicates values that
5 exceed the cleanup standard. Right?

6 A. Yeah, at a particular point. Yes.

7 Q. Okay. So all of these bold texts pre- or
8 post-remediation, whether or not there is remediation,
9 those are all exceedances of the New Jersey cleanup
10 standard. Right?

11 MR. SCHICK: Objection. Form.

12 A. Each of those individual points exceeds the
13 standard if they are in bold -- bold type.

14 (Exhibit No. 95 marked.)

15 Q. (By Mr. Nidel) I've handed you Exhibit 95.
16 Exhibit 95 is a letter December 8th, 2016 from you to
17 Leroy and Betty Nobles.

18 A. Yes.

19 Q. And then it's got an attachment which is the
20 data for their -- the actual sample data for their
21 property. Is that correct?

22 A. Yes.

23 Q. Okay. And it says again, Enclosed is the
24 Property Sampling Report for your property. Analyses

1 of soil samples collected on your property indicate
2 that measured concentrations of arsenic, copper, and
3 lead are below the cleanup levels established by the
4 NJDEP. Do you see that?

5 A. I do.

6 Q. Okay. And we look at the letter, it's got a
7 property sampling report summary that indicate all the
8 numbers on that page are below the respective cleanup
9 levels. Right?

10 A. The 95 percent UCL of the mean is below the
11 applicable cleanup standards for all three
12 constituents.

13 Q. Okay. And then -- but if we look at the
14 actual data, they've got some arsenic, three locations
15 of arsenic, four if you count the crossed-out result,
16 as well as four locations of lead if you count the
17 crossed-out result that actually exceed the cleanup
18 standard. Correct?

19 A. On an individual point basis, that's correct.

20 Q. Okay. And three, the three surface samples,
21 all three of those exceed for both lead and arsenic at
22 the surface of their property. Correct?

23 A. The individual point samples do, yes, but if
24 I could make just a minor clarification, again, with

1 the collection of the data here. You'll note that the
2 19.6 and the 23.8 are both the same sample, one is the
3 regular sample and one is a duplicate. So you're kind
4 of -- you're double-dipping there, so there's --
5 there's two arsenics and two leads, not three and
6 three.

7 Q. Okay. Does it make a difference to your
8 action plan whether you have two samples that exceed
9 or three, that make a difference?

10 A. What makes a difference is what the 95
11 percent UCL is for each of the constituents, but the
12 field duplicates are not used in that qualification.
13 They're a quality control check.

14 Q. Okay. So you have a sample that exceeds, you
15 have confirmation of that sample exceedance, and then
16 you have another sample that exceeds. Correct?

17 A. Based on this there are two samples that
18 exceed for lead and for arsenic.

19 Q. Okay. Do you know where on the property
20 those two samples are?

21 A. Not specifically.

22 Q. Okay. And do you -- do you know where the
23 Nobles used -- how the Nobles use their property where
24 those two sample locations are?

1 A. I do not.

2 Q. Do you know how they plan to use them in the
3 future?

4 A. No, I don't.

5 Q. Does your remedial action work plan take into
6 account how people use their property or is it just
7 based on the plans that you have for sampling and then
8 remediation?

9 A. I believe it's on -- it's based on our
10 sampling plan.

11 Q. So you determined an area of concern that you
12 would focus on and you established a sampling plan and
13 then you applied that plan throughout the area.
14 Correct?

15 A. Yeah, as it's described in the work plan,
16 that's correct.

17 (Exhibit No. 96 marked.)

18 Q. Hand you Exhibit 96. Exhibit 96 is an e-mail
19 from you to a handful of people dated September 2nd,
20 2016. Is that right?

21 A. Yes, that's the date.

22 Q. Okay. Your e-mail -- and I don't understand
23 these things necessarily, but your e-mail says
24 Freeport-McMoRan. Right? Do you see that?

1 A. Yes.

2 Q. And then Jason Hughes. Who is Jason Hughes?

3 A. Jason Hughes is an attorney.

4 Q. Okay. And he's at Freeport Minerals Corp.?

5 A. Yes, he works -- he works for Freeport
6 Minerals.

7 Q. Okay. How come yours don't say Freeport
8 Minerals?

9 A. I don't know. I mean, I work for Freeport
10 Minerals and think the contents of my e-mail footer is
11 necessarily an issue.

12 Q. How you hold yourself out to your contractors
13 and to the public and to me is not an issue that
14 you're the director of discontinued operations for
15 Freeport-McMoRan, Inc.?

16 A. I work for Freeport Minerals Corporation.

17 Q. Okay. Your -- your e-mail footer doesn't say
18 that. Correct?

19 A. It -- in this case, it doesn't, no.

20 Q. Okay. And your business card does not say
21 that, does it?

22 A. No, but Freeport Minerals is my employer.
23 That's who pays me.

24 Q. Okay. Do you get W-2s every year?

1 A. Yeah.

2 Q. Okay. I'd request a copy of your W-2s. We
3 can redact salary information, but I'd like to see
4 those W-2s.

5 There's an e-mail there where you're
6 forwarding from Mike McNally. It says, Thanks, Joe -
7 I think NJDEP is concerned that, even if sampling is
8 not complete for a given property but existing data
9 for the property indicates elevated surface
10 concentrations, the owner should be notified
11 particularly if there is a sensitive population. Do
12 you see that?

13 A. I see where it says that.

14 Q. Okay. How quickly after the samples were
15 received were property owners notified?

16 A. I don't recall on a property-by-property
17 basis.

18 Q. Did you have a target that you tried to
19 achieve for quality purposes?

20 A. I don't think there was any particular
21 target.

22 Q. Okay. Who was Fred Mumford?

23 A. I believe Mr. Mumford works for the DEP. I'm
24 not sure.

1 Q. And did Mr. Mumford raise a concern about
2 soil exceedances for lead above 1,200 parts per
3 million?

4 A. (No response.)

5 Q. Did he do that?

6 A. I'm reading.

7 Q. You prepared for this deposition to testify.
8 My question is not about the document. My question is
9 did --

10 A. You're asking me what Mr. Mumford was --

11 Q. Yeah.

12 A. -- interested in --

13 Q. Right.

14 A. -- so I'm trying to refresh my memory on what
15 Mr. McNally told me in September of 2016 what Mr.
16 Mumford's issue was.

17 Q. Okay.

18 MR. NIDEL: We can go off the record.

19 THE VIDEOGRAPHER: We are off the
20 record. It is 1:44 p.m.

21 (Break.)

22 THE VIDEOGRAPHER: Okay. We are back on
23 the record. It's 1:49 and it's a continuation of Tape
24 10.

1 (Exhibit No. 97 marked.)

2 Q. (By Mr. Nidel) I handed you -- I know
3 there's a question pending but I just want to clarify
4 when you give an answer. I've handed you another
5 exhibit which we've marked as Exhibit 97 which is
6 another e-mail chain that you're on. I just want to
7 acknowledge that for the record.

8 If you could acknowledge what that document
9 is and then we'll get back to my answer.

10 A. Exhibit 97 is an e-mail from me to a number
11 of people about -- subject is USMR Carteret - call
12 with Fred Mumford of NJDEP.

13 Q. Okay. And does it -- does reviewing
14 Exhibits 96 and 97 refresh your recollection as to a
15 concern raised by Mr. Mumford about lead exceedances
16 above 1,200?

17 A. Yeah, as I recall the inquiry from the DEP
18 from Mr. Mumford to Mr. McNally was a bit more general
19 in nature. Apparently they became aware of another
20 project that EPA was working on. NJDEP had not
21 apparently been briefed by Mr. McNally in a while
22 regarding the Carteret project and wanted to touch
23 base with him to raise some issues that apparently the
24 EPA was dealing with in another jurisdiction. What

1 this as I recall ultimately culminated in was a
2 meeting with USMR, the LSRP and the DEP where the DEP
3 was provided with a pretty exhaustive presentation of
4 USMR's various public outreach activities.

5 Q. Okay. And what steps were taken to address
6 the concern about lead above 1,200 in the zero to
7 12-inch zone?

8 A. Well, if you -- if you go back to the second
9 exhibit -- Exhibit 97 here, apparently Mr. Mumford was
10 wondering whether we were prioritizing cleanup for
11 those residences that had sensitive populations and I
12 think, as I've testified before, we have done that.
13 Residences with exceedances at certain levels where
14 sensitive populations are living are prioritized for
15 remediation. So I think this is kind of consistent
16 with and responsive to Mr. Mumford's inquiry to Mr.
17 McNally.

18 Q. When did the USMR operations shut down?

19 A. Generally smelting operations, I believe,
20 shut down in 1986 and there were some ongoing
21 operations until I believe the early '90s.

22 Q. Okay. When did the emissions of lead and
23 arsenic from the USMR operations stop or shut down,
24 cease?

1 A. Operations at the facility ceased in the 1986
2 time frame.

3 Q. When did emissions of lead and arsenic from
4 those operations cease?

5 A. Lead and arsenic from those operations ceased
6 in 1986.

7 Q. Okay. Is any of the lead and arsenic that's
8 in the neighborhood a result of those operations?

9 MR. SCHICK: Objection. Form.

10 A. (No response.)

11 Q. (By Mr. Nidel) Does USMR believe that any of
12 the lead and arsenic that's in those neighborhoods --
13 in that neighborhood is a result of its operations?

14 A. I believe we -- we spoke to this yesterday at
15 length, but it's possible that some of the lead and
16 arsenic in the AOC is attributable to USMR's
17 operations.

18 Q. Okay. And if the lead and arsenic -- well,
19 let me -- let me go to another exhibit just might
20 help.

21 (Exhibit No. 98 marked.)

22 Q. Handed you Exhibit 98. Exhibit 98 is all of
23 the data exported from the TIA database and then
24 filtered for the zero to 6-inch depth interval with

1 lead samples above 1,200. Does that look right to
2 you?

3 A. It appears that all of these individual
4 sampling locations have lead values in excess of
5 1,200.

6 Q. Okay. So if any of that lead was the result
7 of USMR's operations, which I think you said was
8 possible, that lead would have been put there sometime
9 before and up to 1986. Correct?

10 MR. SCHICK: Objection. Form.

11 A. To the extent that smelter operations ceased
12 in 1986 and whether any of the lead in these
13 particular samples was attributable to USMR
14 operations, it would have occurred before 1986.

15 Q. (By Mr. Nidel) What steps has USMR taken to
16 test the blood of anyone living on those properties
17 since 1986?

18 MR. SCHICK: Objection. Form. Asked
19 and answered.

20 Q. (By Mr. Nidel) For lead.

21 A. I'm not aware that USMR has undertaken any
22 blood lead testing program in Carteret.

23 Q. Do -- does USMR know how many children grew
24 up on each of those PPINs that had lead in the surface

1 above 1,200 since 1986?

2 A. No.

3 (Exhibit No. 99 marked.)

4 Q. I hand you Exhibit 99 to your deposition.

5 Exhibit 99 is a screen capture of the TIA database

6 showing I think it's called grab sample analytical, so

7 the analytical sample results as depicted by green and

8 red triangles and it depicts the AOC and then the

9 extent of the transects. Does that look correct?

10 A. That's what it appears to be, yes.

11 Q. Okay. Can you do me a favor with the --

12 maybe the pink marker and outline the area as best you

13 can, I understand it's not going to be precise, but

14 the area that -- in the northeast corner that was

15 redeveloped and ultimately excluded from the ISDA.

16 A. Can I look back at one of the other drawings

17 I may have -- where's the first one we looked at

18 today?

19 Q. Maybe it's easier -- if it's easier if you

20 don't outline it but maybe put an X in the area.

21 A. Okay.

22 Q. Okay. Well, I'm going to go back to outline

23 it, if you could outline it as best you can.

24 A. Okay. You're asking, again, the portion of

1 the ISDA that was not included in the AOC?

2 Q. Right. I think we want to use -- have you
3 use the blue.

4 A. Blue?

5 Q. That will show up better.

6 MR. GERMAN: Only because there's
7 already fuchsia on that one.

8 Q. (By Mr. Nidel) Fuchsia?

9 A. Fuchsia. (Complying.)

10 Q. We don't want to clash with the fuchsia.

11 A. Okay.

12 Q. Okay.

13 MR. NIDEL: So the witness has indicated
14 by hashing out an area on Exhibit 99 that was the area
15 that was redeveloped and excluded from the IS -- or
16 excluded from the AOC.

17 Q. (By Mr. Nidel) Would you agree that in the
18 remaining property there is contamination throughout
19 the property?

20 MR. SCHICK: Objection. Form.

21 A. What property are you talking about, please?

22 Q. (By Mr. Nidel) Within the AOC.

23 MR. SCHICK: Same objection.

24 A. I don't understand the question.

1 Q. (By Mr. Nidel) Yeah, would you -- would --
2 taking out the area that was excluded from the AOC
3 that you just hashed out, would you agree that there
4 is contamination generally throughout the area?

5 A. Throughout the --

6 MR. SCHICK: Objection. Form.

7 A. Throughout the --

8 Q. (By Mr. Nidel) Throughout the area of the
9 AOC.

10 A. AOC? There are quite a few properties within
11 the AOC that exceed the residential cleanup standard
12 for one of the three constituents.

13 (Exhibit No. 100 marked.)

14 Q. I've handed you Exhibit 100. Exhibit 100 is
15 a meeting minutes I believe that you took from a
16 meeting with DEP in 2016. Is that correct?

17 A. That's correct.

18 Q. And you were at this meeting along with a
19 number of others that are listed in attendance there.
20 Right?

21 A. I believe that represents the attendee list.

22 Q. Okay. And you took these notes. Right?

23 A. I believe I did.

24 Q. Okay. Karen said, How do we explain the UCL

1 in our letters? Do we try to make it understandable?

2 Do you see that?

3 A. I do.

4 Q. She had a concern that the UCL might not be
5 understood by members of the public that were
6 receiving these letters. Right?

7 MR. SCHICK: Objection. Form.

8 A. That apparently was a question raised by Ms.
9 Kloo during the meeting.

10 Q. (By Mr. Nidel) Okay. Well, you were at the
11 meeting. Right?

12 A. I was.

13 Q. Okay.

14 A. And I just explained apparently that was a
15 question she raised.

16 Q. And there's also -- well, let me ask you
17 this: How were the direction of the transects, how
18 were the transects chosen, the direction?

19 A. The direction of the transects? They were
20 essentially chosen to be radially outward from the
21 existing AOC in -- in three directions.

22 Q. Okay. Why were there not other -- why was
23 there not a direct west sample, for example, or a
24 transect, for example?

1 A. It was the opinion of our consultant that
2 that direction was appropriate. One of the things
3 that we attempted to do as part of the transect
4 evaluation was to obtain samples from properties where
5 disturbance had not occurred as defined by Sanborn
6 maps. So that particular direction provided the best
7 ability to meet that objective.

8 Q. My understanding was that someone recommended
9 those directions based on wind directions. Do you
10 recall that?

11 A. I don't recall that. I recall the goal was
12 to go beyond the existing AOC boundary in the
13 direction away from that boundary.

14 Q. Okay. I'm just trying to understand. If we
15 look at Exhibit 99 and we say that we've got, you
16 know -- if we say we've got a 10:00 o'clock, 11:00
17 o'clock and a 12:00 o'clock, understanding that
18 they're not exactly on time, why don't we have an 8:00
19 o'clock or something more off to the left there?

20 A. 8:00 o'clock in that direction is into a
21 nonresidential area.

22 Q. Well, maybe my clock face is bad because I'm
23 saying if we line our clock up that this is 9:00
24 o'clock, okay, so really --

1 A. Where is your 9:00 o'clock?

2 Q. Well, that would be the leftmost transect.

3 Okay. They're all somewhat north transects. Why is
4 there not some -- an additional transect to the left
5 there over to Port Reading?

6 A. As I mentioned, one of the goals was to
7 obtain samples from properties that had not been
8 disturbed for long periods of time, and based on the
9 Sanborn maps and the evaluation of the data, the
10 properties that are in that leftmost transect fit the
11 bill. I believe if we would have gone with, you know,
12 something -- see, I would call this 10:00 o'clock. If
13 something more like 9:00 o'clock, it would have gone
14 into areas that had been redeveloped or disturbed and,
15 you know, we would have potentially been in, you know,
16 a situation where, you know, we would be encountering
17 properties that, you know, weren't necessarily
18 representative of what had been there for a long
19 period of time.

20 Q. Okay. And the property that you excluded in
21 the northeast you excluded because it wasn't
22 representative of what -- of soil that had been there
23 for a long period of time. Correct?

24 A. When the sampling in that northeast area,

1 again, of the AOC was done as part of the ISDA, we had
2 not done an analysis of, you know, whether that
3 property had been recently developed or not. It was
4 only following the evaluation of the data that that
5 area was excluded from the AOC.

6 Q. I understand that, but I'm asking you now you
7 would agree with me, as you just indicated for us,
8 that that area to the northeast is not representative
9 because the soils that are there are not soils that
10 were -- let's put it this way: The soils that were
11 there are known to have been disturbed. Right?

12 MR. SCHICK: Objection. Form.

13 A. Those properties are relatively new in
14 comparison to, you know, other parts of the AOC.

15 Q. (By Mr. Nidel) Okay. You talked about
16 you're not going off at 9:00 o'clock because you would
17 get to properties like -- you may get to properties
18 like that northeast corner that have soils that are
19 not representative because they've been redeveloped.
20 Right?

21 A. Surficial soils in areas that have been
22 redeveloped are not as indicative of the long-term
23 impact as compared to soils that have been there for a
24 long time. Those were the ones that we focused on.

1 Q. Okay. And the soils in the northeast corner
2 are not as indicative as soils that have been there?

3 A. They are less indicative than, you know,
4 soils that have been there longer. You know, I don't
5 know exactly when those properties were redeveloped,
6 but I seem to recall from yesterday it was sometime in
7 the '60s or '70s based on the Sanborn maps that you
8 shared with me. So, you know, those properties were
9 there during some period of operation of the facility,
10 but, you know, there -- weren't there for as long of a
11 period of time in an undisturbed fashion as some of
12 the other properties in the AOC.

13 Q. And you don't know -- can you tell me when
14 properties in the 9:00 o'clock direction or over in
15 Port Reading were developed?

16 A. I can't tell you precisely, but we did
17 develop or look at Sanborn maps to do that analysis
18 and we chose properties along the three axes that had
19 been undisturbed for longer periods of time.

20 Q. Okay. We'll go back to Exhibit 100.

21 A. Okay.

22 Q. What was Mike McNally's explanation of why
23 you're going in this direction -- these directions and
24 not others?

1 MR. SCHICK: It's the second from the
2 bottom. It might help the witness if you direct him.

3 MR. NIDEL: Normally I do that. I
4 just -- I thought -- we were down near the bottom. I
5 thought he would pick it up.

6 A. Well, I don't recall exactly what Mr. McNally
7 said in that meeting but I imagine it was similar to
8 what I just described to you.

9 Q. (By Mr. Nidel) Okay. If we turn to the back
10 page, it says, Ken - have we ever considered doing any
11 blood testing? We advise that we looked at available
12 public data and we didn't believe there is a problem.
13 Data on a county basis. Do you see that?

14 A. I do.

15 Q. Okay. So you're saying we advised that we
16 looked at the public data. What data did you review?

17 A. I believe there's data from the New Jersey
18 Department of Health that summarizes blood lead data
19 for children on a -- I believe it's on a
20 county-by-county basis.

21 Q. Okay. And how many people in that county
22 data -- what's the Carteret elementary school called?

23 A. I don't know.

24 Q. Okay.

1 A. Maybe it's the Carteret Elementary School for
2 all I know.

3 Q. How many -- how many people -- how many
4 children in the Carteret elementary school were
5 encompassed in that data that you reviewed?

6 A. I don't know specifically.

7 Q. It didn't provide the information as to what
8 school they went to, did it, because it was
9 county-by-county. Right?

10 A. It's -- it's my understanding it's on a
11 county-by-county basis.

12 Q. Okay. How many children did they test?

13 A. I don't know off the top of my head.

14 Q. Okay. In the data review, how many -- that
15 you reviewed that you used to push back on the
16 question of blood testing to Karen, how many
17 children's blood lead data did you review?

18 MR. SCHICK: Objection. Form.

19 A. Where did I push back to Karen on blood lead
20 testing?

21 Q. (By Mr. Nidel) Have we ever considered doing
22 any blood lead testing she asks. Right?

23 A. Well, that's Ken and not Karen, but --

24 Q. Okay.

1 A. And I'm not -- I don't recall whether he was
2 referring to a we as being USMR or a we as referring
3 to the DEP.

4 Q. Well, you gave the response. Right?

5 A. I believe that it was either myself or
6 Ms. Szegedi that suggested that we -- or advised that
7 we look at the available public data. I don't
8 remember if it was me or not that made that statement,
9 but I'm aware -- I'm aware that there was, you know, a
10 review of the publicly available data.

11 Q. Who else from Freeport was there?

12 MR. SCHICK: Objection. Form.

13 A. I was the only Freeport attendee.

14 Q. (By Mr. Nidel) Okay. How many children's
15 blood lead data from the local Carteret elementary did
16 you review?

17 A. I don't know if we specifically looked at
18 Carteret children's data. I believe the data that was
19 available was on a Middlesex County basis, which would
20 include Carteret.

21 Q. How far into Middlesex County did lead
22 emissions from the smelter go?

23 A. I don't know.

24 MR. SCHICK: Objection. Form.

1 Q. (By Mr. Nidel) Do you believe they went past
2 Carteret?

3 A. I don't know.

4 Q. What relevance would other children in the
5 County's blood lead data have to whether you've
6 impacted kids growing up in Carteret?

7 MR. SCHICK: Objection. Form.

8 A. Say that again.

9 Q. (By Mr. Nidel) Yeah. What relevance would
10 kids growing up in other towns in the county, what
11 would their blood lead data have to do with children
12 that are growing up in Carteret?

13 A. You know, as I mentioned, the -- you know, I
14 believe the data is consolidated on a county-by-county
15 basis but that doesn't take away from the fact that if
16 there are children in Carteret, they likely have had
17 their blood tested and should those results have shown
18 any issues that, you know, somebody would have been
19 made aware of that, the county health department, for
20 example.

21 Q. Okay. The school data -- you said if there
22 were children in Carteret then they likely had had
23 their blood tested. You didn't go -- you went and got
24 the county school blood lead data. Correct?

1 A. I believe we obtained publicly available
2 information.

3 Q. Okay. And how many kids were tested in that
4 publicly available information?

5 MR. SCHICK: Objection. Asked and
6 answered.

7 Q. (By Mr. Nidel) Period.

8 A. Off the top of my head I don't know. I would
9 have to go back and look at the reports again.

10 Q. Okay. My recollection is that one of those
11 reports identified three kids in the county tested.
12 Do you recall any of that test data?

13 A. I don't recall the number.

14 Q. Okay. But you don't know. Right?

15 A. I don't recall the number.

16 Q. And you don't recall how many of kids that
17 were tested in the test data or reflected in that test
18 data went to the local Carteret school, do you?

19 A. It's -- the data is not provided to that
20 level of specificity.

21 Q. Okay. But you could have tested kids' blood.
22 Right?

23 MR. SCHICK: Objection. Form.

24 A. I don't know whether the, you know, USMR

1 would have the authority to require children's blood
2 testing.

3 Q. (By Mr. Nidel) I didn't ask about requiring,
4 did I? I just said you could have tested their blood.
5 Right?

6 MR. SCHICK: Objection. Form.

7 Q. (By Mr. Nidel) You could have offered free
8 testing for blood?

9 A. We did not offer free testing for blood.

10 Q. But you could have. Right?

11 A. We -- we did not.

12 Q. Ken brought it up. Right?

13 A. Again, you know, I don't recall whether the
14 we referred to USMR or to the DEP, but if it referred
15 to USMR, you know, we've not considered doing any
16 blood lead testing.

17 (Exhibit No. 101 marked.)

18 Q. I'll hand you Exhibit 101. It's another set
19 of meeting notes from 2016, Tuesday, October 4th,
20 2016. Is that right?

21 A. Yes.

22 Q. In the middle of the top of the page there's
23 a note: Vajira - do we have speciation on the form of
24 arsenic? Differentiate between background arsenic.

1 Answer - we don't have speciation but this is
2 something we need to be aware of. Do you see that?

3 A. I do.

4 Q. Is there a way that you could have speciated
5 the arsenic?

6 A. I don't know. I don't know, you know, how
7 that would be done.

8 Q. Okay. You didn't ask Vajira if there was
9 some way that you could do it so that you might
10 implement that in your testing?

11 A. It was a comment made by Vajira and we told
12 him we don't have speciation.

13 Q. Okay. But then Vajira raised a question
14 about analytical methods to differentiate lead paint
15 from nonlead paint and -- lead paint lead from nonlead
16 paint lead, and your answer or the answer was: There
17 are speciation methods but we're not taking that into
18 consideration for remediation decisions. Do you see
19 that?

20 A. Yes.

21 Q. So there are speciation methods for -- to
22 distinguish lead in soils from being -- being from
23 lead paint versus from other sources. Right?

24 A. It's my understanding that there are.

1 Q. Okay. But you've never used those methods.
2 Right?

3 A. Again, for purposes of our remediation, we're
4 within the AOC not attempting to attribute lead from
5 -- we're attempting to avoid potential contamination
6 of samples with lead paint, but then to the extent
7 where there is lead in the samples we're not parsing
8 out lead paint derived -- paint-derived lead from
9 nonpaint-derived lead as part of our cleanup. We're
10 cleaning up everything.

11 Q. Okay. So you thought that your methods of
12 avoiding lead paint were generally sufficient. Is
13 that fair?

14 A. The offsets that we used were an attempt to
15 avoid undue impact from lead paint in the samples from
16 yards.

17 Q. Okay. And generally with few exceptions that
18 was sufficient. Correct?

19 A. We believe it was generally sufficient.
20 Whether we avoided every bit of lead paint in our
21 sampling program, I can't say that that occurred.

22 Q. Okay. And then Vajira expressed some
23 concerns about compliance averaging in the remedial
24 action work plan. Right?

1 A. Where is that?

2 Q. Well --

3 A. Oh, I see.

4 Q. -- did he?

5 A. Hold on. Again, I'm rereading notes from a
6 meeting that happened a year and a half ago.

7 Q. I understand that, but I asked you if there
8 were concerns about compliance averaging earlier
9 before we talked about the document and I don't think
10 you could recall them so I'm kind of curious. It
11 seems like it was something that was discussed a
12 number of times, but Vajira raised those concerns at
13 that meeting. Right?

14 MR. SCHICK: Objection. Form.

15 A. They were raised by the -- by Vajira.

16 Q. (By Mr. Nidel) Okay. And there was a
17 contention that if they -- if you leave contamination
18 in place above the standard, that it's not protective
19 of human health in the environment. Do you see that?

20 A. That's what Vajira was contending.

21 Q. Okay. What was your -- what was USMR's
22 response to that concern?

23 A. Again, I think it's important to note that
24 Vajira is a consultant for the Borough. He's not a

1 USMR consultant. These were issues that Vajira raised
2 about various aspects of our program and, you know,
3 it's -- you know, with all due respect to Vajira and
4 his concerns about compliance averaging, we have
5 implemented a plan that utilizes compliance averaging
6 consistent with regulatory requirements.

7 Q. Okay. So the Borough of Carteret had the
8 concern that compliance averaging might lead to
9 leaving contamination in place that's above the
10 standard and therefore not be protective of public
11 health and the environment. Right?

12 MR. SCHICK: Objection. Form.

13 A. That was a comment made by Vajira at that
14 meeting.

15 Q. (By Mr. Nidel) Okay. So your understanding
16 sitting at the meeting with Vajira being a
17 representative or consultant from the Borough, you
18 understood that to be the Borough had a concern about
19 compliance averaging leaving contamination in place
20 above the standard because it's not protective of
21 public health and the environment. Right?

22 MR. SCHICK: Objection. Form.

23 A. Again, that was Vajira's contention at the
24 meeting, but in the opinion of the LSRP, the approach

1 that we've done to remediation as part of our remedial
2 action work plan which utilizes compliance averaging
3 is acceptable and consistent with New Jersey
4 regulations.

5 Q. Okay. But you didn't want Vajira poking
6 around in your database. Right?

7 MR. SCHICK: Objection. Form.

8 A. We didn't want Vajira poking around in our
9 database.

10 Q. (By Mr. Nidel) You didn't want him to see
11 the raw data so that he could decide for himself
12 whether compliance averaging was protective. Right?

13 MR. SCHICK: Objection. Form.

14 A. I don't recall that we've given the Borough
15 permission to access TIA.

16 Q. (By Mr. Nidel) Right. You didn't want him
17 poking around in that database. Right?

18 MR. SCHICK: Same objection.

19 A. I don't believe we've given the Borough
20 access to the database.

21 Q. (By Mr. Nidel) Okay. And that's because you
22 didn't want him poking around in the database. Right?

23 MR. SCHICK: Objection. Form.

24 A. We did not give the Borough permission to

1 access the database.

2 Q. (By Mr. Nidel) Okay. Because you felt you
3 didn't want him poking around in the database. Right?

4 MR. SCHICK: Objection. Form. Asked
5 and answered.

6 A. Yeah, I think I've answered it.

7 Q. (By Mr. Nidel) No, all you've said is you
8 didn't give him access. I'm asking if your concern
9 was you didn't want him poking around in the database,
10 yes or no?

11 A. I've asked and answered it -- I've answered
12 this already. I'm sorry.

13 Q. Okay. Why didn't you want him poking around
14 in your database?

15 MR. SCHICK: Objection. Form and asked
16 and answered.

17 A. I don't have an answer for you if -- if what
18 I've said previously isn't satisfying you.

19 Q. (By Mr. Nidel) It's not satisfying to me.

20 A. Sorry.

21 Q. Why didn't you want him poking around in your
22 database?

23 MR. SCHICK: Objection. Form. There's
24 no predicate.

1 MR. NIDEL: I don't need a predicate to
2 ask a question.

3 Q. (By Mr. Nidel) Why didn't you want him
4 poking around in your database?

5 MR. SCHICK: Same objection.

6 A. We did not give the Borough approval to
7 access the database.

8 Q. (By Mr. Nidel) Okay. And Brad brought up at
9 the end of the notes there, Does DEP know that we
10 might need deed notices? You're not a Realtor. I get
11 it. But you did talk about deed notices with Brad.
12 Right?

13 A. Brad raised the issue at that meeting.

14 Q. Okay. And I don't know, did you give him an
15 answer, We'll need to address that question on a
16 property-by-property basis?

17 A. Yeah. And you know, Mr. Campbell was at that
18 meeting in his capacity as a representative of the
19 Borough, so, you know, I believe his inquiry was
20 specific to Borough properties. We've already -- I've
21 already told you that, you know, it's not USMR's plan
22 for any of the remedial activities that it's doing on
23 regular residential properties to incorporate deed
24 notices, but we have indicated that with respect to

1 Borough properties we may need to incorporate deed
2 notices. And, again, not every Borough property is
3 the same, so deed notices on any specific Borough
4 property would be addressed on a property-by-property
5 basis.

6 Q. Okay. But you treated Borough properties and
7 residential properties the same for purposes of your
8 action work plan. Right?

9 MR. SCHICK: Objection. Form.

10 A. For -- for purposes of sampling, yes. For
11 purposes of remediation, there -- the work plan does
12 provide for the use of deed notices. It's, you know,
13 USMR's position that it does not intend to do deed
14 notices on residential property, but it's likely that
15 we will use deed notices on certain Borough properties
16 but likely not all Borough properties.

17 Q. (By Mr. Nidel) Okay. Brad was the
18 commissioner of the -- former commissioner of the DEP.
19 Right?

20 A. It's my understanding, yes.

21 Q. Okay. And he was concerned about the issue
22 with respect to Borough properties. Right?

23 A. He was -- all of the interaction that Mr.
24 Campbell has had on this project has been as a

1 representative of the Borough.

2 Q. Okay. But you knew that his past experience
3 was as commissioner of the DEP. Right?

4 A. One of his previous jobs was as commissioner
5 of the DEP, yes.

6 Q. All right. If we turn the page over it says
7 JAB -- is that you?

8 A. That would be me.

9 Q. -- to call Vajira and let him know that the
10 RAWP has gone in and tried to dissuade him from poking
11 around on the data.

12 A. Yeah.

13 Q. Why did you want to dissuade him from poking
14 around on the data?

15 A. Again, we -- you know, it was -- it was our
16 opinion we -- we did not want other people accessing
17 the database.

18 Q. Okay. Just like you didn't want people to
19 get their actual sample results in the letters you
20 sent them. Right?

21 MR. SCHICK: Objection. Form.

22 Q. (By Mr. Nidel) Right?

23 A. Again, the data we've provided to people is
24 consistent with the 95 percent UCL as provided for by

1 the regulations.

2 Q. Okay. If you were providing people the
3 actual data, why would you have a concern about
4 someone like Vajira poking around in the data?

5 MR. SCHICK: Same objection.

6 A. (No response.)

7 Q. (By Mr. Nidel) Why?

8 A. Again, you know, we chose not to allow any
9 outside parties to access the database.

10 Q. I'm not asking about the database. I'm
11 asking about the data. The word that you used in your
12 notes was the data. We don't want him poking around
13 on the data.

14 A. Well, the data is housed in the database, so
15 that would -- if you want to say poking around on the
16 database, that's equally correct.

17 Q. I don't have the database here. I've given
18 you a lot of the data from the database. You can
19 export the entire data set from the database in one
20 click. Right?

21 A. Somebody can.

22 Q. Okay. So that somebody could have done that
23 and exported it and provided it to Vajira. Correct?

24 A. We chose not to make the entire database

1 available to Vajira.

2 Q. Okay. Because you didn't want him poking
3 around on it. Right?

4 A. No. We chose to not make it available to
5 him.

6 Q. Is that your answer?

7 A. Yeah.

8 Q. Okay.

9 (Exhibit No. 102 marked.)

10 Q. 102, please. You took these notes -- Exhibit
11 102 is notes from 2016 that you took Friday, August
12 19th. Right?

13 A. Yes.

14 Q. Okay. You took these notes on Friday, August
15 19th. Right?

16 A. Yes.

17 Q. Okay. When did you provide these notes to
18 counsel?

19 A. I don't know specifically.

20 Q. Was it a week ago?

21 A. No. I believe it was, you know, before that.

22 Q. Okay. How long before that? I don't need an
23 exact date. I just need months, year.

24 A. I don't recall exactly when they were

1 provided to counsel.

2 Q. Okay. Was it more than two weeks ago?

3 A. I believe so.

4 Q. Was it more than three weeks ago?

5 A. I believe so.

6 Q. Was it more than a month ago?

7 A. I believe so.

8 Q. Was it more than two months ago?

9 A. Now, I can't recall.

10 Q. It was at least a month, maybe more than two
11 months?

12 A. It was at least a month.

13 Q. Okay. Was it more than three months?

14 A. I said I don't know if it was more than two
15 months so I don't know if it's more than three months.

16 Q. Did you gather these meeting minutes and
17 produce them to counsel or did someone else do that on
18 your behalf?

19 A. I believe somebody else did it on my behalf.

20 Q. Who was that?

21 A. I believe one of the clerks in our legal
22 department.

23 Q. Okay. When did you ask him to do that?

24 A. I don't recall.

1 Q. Who -- who was it? What was his name?

2 A. I believe it was Michelle Martinez.

3 Q. Okay. Her name. Sorry.

4 In Exhibit 102 there's a note: On PPN -- on
5 PPIN 1026 method indicates no remediation is required
6 even though we have a lead exceedance at 6 to 12
7 inches. However, since we're reporting the individual
8 UCLs to residents, we'll need to clarify -- we'll need
9 to carefully review how we provide the numbers to the
10 property owners. Do you see that?

11 A. I do.

12 Q. Okay. So is that -- what are these notes?

13 A. These are notes that I took in a meeting or a
14 phone call. I don't know exactly, you know, where I
15 was when this -- when I took these particular notes.

16 Q. Okay. But you're expressing concern that
17 because you're actually giving the individual UCLs to
18 residents they're going to see that exceedance so
19 you've got to carefully review how you provide the
20 numbers to the property owners. Right?

21 MR. SCHICK: Objection. Form.

22 A. Well, we are giving the UCLs to the residents
23 and we need to review how that information is provided
24 to the property owners.

1 Q. (By Mr. Nidel) Carefully. Right?

2 A. Of course.

3 Q. And we know how you provided it to them
4 because we saw it in Exhibit 4. You gave them the
5 bold number but you told them there was no
6 contamination and it didn't need cleaning up. Right?

7 MR. SCHICK: Objection. Form.

8 A. Well, we give the individual UCLs.

9 Q. (By Mr. Nidel) Right. But you -- you had a
10 concern about how you provided that information to the
11 owner because it might trigger their attention.
12 Right?

13 MR. SCHICK: Objection. Form.

14 A. No. We -- we wanted to carefully review how
15 that information was provided.

16 Q. (By Mr. Nidel) And what was the outcome of
17 that careful review?

18 A. I'm assuming that the outcome was the sample
19 reports that several of which you've showed me earlier
20 today.

21 Q. Did the Borough have a concern about public
22 questions regarding the threat to public health?

23 A. Did the Borough have a concern about public
24 questions?

1 Q. Yeah.

2 A. Not anything that I -- specifically that I
3 recall.

4 Q. You don't recall the Borough having a concern
5 about questions they were receiving about the health
6 risk associated with this?

7 A. I don't recall anything specific and, you
8 know, generally if there was a question from the
9 Borough, I think we requested that they pass that
10 along to our outreach office.

11 (Exhibit No. 103 marked.)

12 Q. I'll hand you Exhibit 103. Are these meeting
13 minutes from 2016 meeting that you had on July 27th?

14 A. That's what they appear to be.

15 Q. Okay. In the middle of the page it says,
16 Brad says his immediate concern is public questions
17 about what levels of exposure might be a problem. Do
18 you see that?

19 A. I see where it says that.

20 Q. Okay. Do you recall that Brad had an
21 immediate concern about questions he was getting from
22 the public or that the Borough was getting from the
23 public about what levels of exposure might be a
24 problem?

1 A. The way I -- I read that is that that's a
2 concern that he had, but whether there was any actual
3 public questions, I don't think Mr. Campbell indicated
4 that there -- that there had been any questions.

5 Q. Did he indicate that there had not been, that
6 there had been or you don't know?

7 A. I don't believe he indicated, but had he
8 indicated that there had been public questions, we
9 would have referred him to direct that person to our
10 outreach office and they would get their questions
11 responded to.

12 Q. Okay. Are inquiries to your outreach office,
13 are they contained in the TIA database?

14 A. It's my understanding there's a
15 communications log as part of TIA.

16 MR. SCHICK: Why don't we take a break,
17 if that's okay?

18 MR. NIDEL: Let me do one -- if you need
19 a break let's take a break. If you need it we can do
20 it.

21 MR. SCHICK: No. I'll wait.

22 (Exhibit No. 104 marked.)

23 Q. (By Mr. Nidel) Okay. I've handed you
24 Exhibit 104. It's more meeting minutes from 2016,

1 Wednesday, June 15, 2016. Correct?

2 A. Yes, that's what it appears.

3 Q. A meeting you were at. Correct?

4 A. That's correct.

5 Q. There's a first real paragraph there:

6 Discussion of compliance averaging. McNally seems to
7 be comfortable with our approach. McNally wants to
8 think about example where we'd only clean up the back
9 yard and do nothing with the front yet even though the
10 front yard might still have numbers in excess of the
11 standard. McNally uses an example of what if someone
12 has a vegetable garden in the front and we only
13 remediate the back yard even though the front yard has
14 significant exceedances. Probably need to look at on
15 a case by case basis to make sure what we're doing is
16 protective even if it's discretionary on our part. Do
17 you see that?

18 A. I see where it says that.

19 Q. What did you mean by protective?

20 A. Again, you know, to me, protective is whether
21 the constituents of concern have been remediated to
22 such a point where the UCL is below the 95 percent
23 confidence limit.

24 Q. Okay. And what does that protect?

1 A. That protects the -- that -- that ensures
2 that the property has been remediated in compliance
3 with the real action work plan and the numerical
4 standards of the State.

5 Q. Okay. And what does that protect?

6 A. The standards of the State are designed to
7 protect the residents of the state.

8 Q. The health of the residents of the state?

9 A. To the extent that they're a health-based
10 standard, yes.

11 Q. Is the standard for arsenic a health-based
12 standard?

13 A. I believe that it is.

14 Q. Okay. Is the standard for lead a
15 health-based standard?

16 A. It's my understanding that it is.

17 Q. Okay. So what you meant was protective of
18 people's health. Right?

19 MR. SCHICK: Objection. Form.

20 A. Again, remediation to UCL below the
21 regulatory standard is by definition protective of
22 human health.

23 Q. (By Mr. Nidel) Is leaving the front yard
24 contaminated and the backyard, cleaning it up, is that

1 protective of human health?

2 MR. SCHICK: Objection. Form.

3 A. Again, remediating consistent with our
4 remedial action work plan to a UCL below the
5 regulatory standard is consistent with the regulations
6 and it's protective of human health by definition.

7 Q. (By Mr. Nidel) Okay. The notes go on to
8 say: Offsets, and then it says, Objective to get as
9 clean as reasonable while meeting remedial objective.
10 If it was our house, what would we want to happen? Do
11 you see that?

12 A. I do.

13 Q. Okay. If it was your house, would you want
14 to have the front yard still contaminated when the
15 backyard was cleaned up?

16 MR. SCHICK: Objection. Form.

17 A. If it was -- if it was my house I would want
18 the yard remediated to what the standards are that the
19 State finds acceptable.

20 Q. (By Mr. Nidel) Even if that meant having
21 lead and arsenic above the State cleanup standard?

22 MR. SCHICK: Objection. Form.

23 A. I would -- I would want my property cleaned
24 up to the levels that the State considers safe. In

1 this case it's a UCL below the regulatory criteria.

2 Q. (By Mr. Nidel) What -- what in the
3 regulations or any other reference that you have says
4 that compliance with the UCL where your lead
5 exceedances of the standard makes that property safe?

6 MR. SCHICK: Objection. Form.

7 A. It's compliance with the regulatory standards
8 promulgated by the State. If the State did not
9 consider those standards and the methods of
10 determining compliance with those standards, if the
11 State determine that to be unsafe, they would either
12 have different standards or different methods of
13 calculating compliance. In our case, we are
14 demonstrating compliance consistent with the state
15 regulations. So to -- from my perspective by
16 definition that is safe for the residents of New
17 Jersey as deemed so by the State.

18 Q. (By Mr. Nidel) Okay. So your -- USMR's view
19 is that safe means compliance with the regulations.
20 Right?

21 A. Generally, yes.

22 Q. Okay. And that means safe whether or not you
23 leave arsenic above 400 or -- arsenic above 19 or lead
24 above 400 in the front, side, or back yard of

1 someone's property. Correct?

2 A. Again, I mean, we are working on this program
3 using standards and methodologies developed and
4 approved by the State to determine compliance with
5 the -- with the regulatory standard.

6 Q. Okay. Is it USMR's goal to leave these
7 properties when you're finished your project in a
8 situation that is safe?

9 A. It's USMR's goal to comply with our remedial
10 action work plan which has been developed consistent
11 with regulations that the State of New Jersey has
12 promulgated which are designed to protect the health
13 of its citizens. So by virtue of our compliance with
14 that program we believe that we are doing -- we are
15 implementing this program correctly.

16 Q. Is it Freeport-McMoRan, Inc.'s position that
17 leaving lead on the surface soil above 400 leaves a
18 property safe?

19 MR. SCHICK: Objection. Form and don't
20 answer it. You asked Freeport-McMoRan, Inc. They are
21 not a party to this lawsuit.

22 Q. (By Mr. Nidel) Is it Freeport-McMoRan --
23 Freeport Minerals' position that it is safe to leave a
24 property with lead above 400 in someone's front yard?

1 MR. SCHICK: Objection. Form.

2 A. The opinion of Freeport Minerals Corporation
3 as it pertains to this -- this project is consistent
4 with USMR's opinion.

5 MR. NIDEL: Okay. We can take a break.

6 THE VIDEOGRAPHER: We are off the
7 record. It is 2:42 p.m. This is the end of Tape 10.

8 (Break.)

9 THE VIDEOGRAPHER: Okay. We are back on
10 the record. It is 2:54 p.m. It's the beginning of
11 Tape 11.

12 (Exhibit No. 105 marked.)

13 Q. (By Mr. Nidel) Hand you Exhibit 105 to your
14 deposition. Exhibit 105 is more meeting minutes or
15 meeting notes from 2016. Wednesday, February 17th.
16 Is that correct?

17 A. That's what it appears, yes.

18 Q. A meeting with the Borough. Right?

19 A. Yes.

20 Q. At the meeting Vajira asked questions. I'm
21 in the middle of the page. He wants to confirm that
22 we're not doing compliance averaging to determine
23 remediation. This is correct.

24 Did you use compliance averaging to do -- to

1 determine remediation?

2 A. Yeah, I'm not sure what I -- what I intended
3 here when I wrote this.

4 Q. Okay. But you did tell Vajira that he was
5 correct that you were not using compliance averaging.
6 Right?

7 A. I don't know whether I said that or whether
8 somebody else at the meeting might have said that.

9 Q. Okay. But you noted that that was correct.
10 Right?

11 A. That's what I wrote. I'm not sure what this
12 -- what it's in reference to exactly.

13 Q. Okay. And then Brad questions whether this
14 approach is consistent with the standstill agreement.
15 What's the standstill agreement?

16 A. The standstill agreement is an agreement that
17 USMR and the Borough entered into in I believe late
18 2012 to essentially stay litigation that was
19 threatened by the Borough.

20 Q. Okay. Was your approach to remediation
21 consistent with the standstill agreement?

22 A. I'm not sure whether the standstill agreement
23 prescribed any remediation because we're -- the
24 standstill agreement was entered into back in 2012,

1 really, before any remediation plans were put
2 together.

3 Q. Okay. Brad goes on to observe that there are
4 lead and arsenic exceedances in the northwest corner
5 of the AOC and asks whether there's been consideration
6 of moving the boundary. Right?

7 A. Yes.

8 Q. We talked about that boundary. You said --
9 or your notes say: We will perform this evaluation
10 when we get to the 20 percent threshold. What's the
11 20 percent threshold?

12 A. There was -- there was a commitment to
13 essentially do the boundary evaluation once a certain
14 amount of data had been collected.

15 Q. Okay.

16 A. And, you know, we've talked about the
17 boundary evaluation for quite a bit over the last
18 couple of days.

19 Q. But the boundary evaluation was only looking
20 at -- what -- what boundaries was it looking at? Just
21 that --

22 A. The boundary of the AOC.

23 Q. Okay. All boundaries of the AOC to the
24 north?

1 A. Generally to the north, yes, that was the
2 portion of the AOC that was of -- of interest.

3 Q. If you'd turn that exhibit over there's a
4 mention of a deadline, the very bottom, it's like the
5 last line on the notes. What was that deadline, the
6 5 --

7 A. Oh, I see.

8 Q. -- 16 deadline.

9 A. There was a deadline, I believe it was a
10 regulatory -- I don't know if it was a regulatory or a
11 statutory deadline within the State of New Jersey that
12 remedial investigation reports for certain sites
13 needed to be submitted by certain dates and in the
14 case of USMR that deadline was May 16th.

15 Q. Is there a deadline for completion of this
16 project?

17 MR. SCHICK: Objection. Form.

18 A. Not that I'm aware of.

19 Q. (By Mr. Nidel) Is there a target completion
20 date?

21 A. We are -- we have -- we have a rough estimate
22 of, you know, when -- you know, given the amount of
23 properties that anticipate remediation and the pace of
24 our remediation we hope to get remediation within the

1 AOC completed probably close to the end of 2019.

2 (Exhibit No. 106 marked.)

3 Q. I hand you Exhibit 106. 106 is a document
4 from USMR. It's a Site Remediation News, Spring of
5 1995. It's a portion of the Site Remediation News
6 addressing compliance averaging as -- as they call it
7 in the Site Remediation News.

8 MR. SCHICK: Objection. Form.

9 Q. (By Mr. Nidel) Did you review this document?

10 A. No, I did not.

11 Q. Okay. Did you review this as part of your
12 management of the remediation project?

13 A. I just said I did not review this document.

14 Q. And I just wanted to be clear. I understand
15 you prepared for this deposition, you reviewed a bunch
16 of documents. I wanted to be clear that my question
17 is this was in the USMR files, it deals with
18 compliance averaging, you might have reviewed it for
19 the deposition, you might have reviewed it for your
20 work on the project management, you might have
21 reviewed it for both so I wanted to make sure I
22 covered both. Okay?

23 A. I have not reviewed this document.

24 Q. Okay. Earlier yesterday I think it was I

1 asked you about your consultants.

2 A. Yes.

3 Q. And I asked you who Integral was?

4 A. Yes.

5 Q. Okay. And you said you didn't know them.
6 Right?

7 A. I know who Integral is. They've worked on
8 other projects for Freeport, but I think you were
9 asking specific to this project.

10 Q. Okay. So they haven't worked on this
11 project?

12 A. I'm not aware that they've -- that they've
13 worked on this project.

14 (Exhibit No. 107 marked.)

15 Q. I hand you Exhibit 107. Exhibit 107 is a
16 memo to Joe Brunner at Freeport-McMoRan, Inc. Is that
17 you?

18 A. It is.

19 Q. Okay. It's from Integral Consulting dated
20 March 14th, 2016.

21 A. Yes.

22 Q. Okay. And it's regarding the residential
23 area of concern in Carteret, New Jersey. Right?

24 A. Yes.

1 Q. Okay. So does this refresh your recollection
2 whether Integral Consulting did some work on this
3 site?

4 A. It -- it refreshes my memory, but the work
5 was -- that was part of this project was actually
6 performed by Geosyntec. We chose not to go with
7 Integral for the work.

8 Q. Okay. But they did some work in evaluating
9 your situation. Right?

10 A. They made a proposal, but, again, you know,
11 it's my recollection that we used Geosyntec to do the
12 actual -- actual work.

13 Q. Well, they clearly had access to your data.
14 Right?

15 A. They had access to data, yes.

16 Q. Okay. So you solicited their -- their memo.
17 Right? They didn't just shoot this to you. Right?

18 A. I believe they provided this in response to a
19 request to potentially do some -- do some work, but as
20 I mentioned the work itself we chose not to go with
21 Integral and went with Geosyntec instead.

22 Q. Okay. Who sent them the request?

23 A. I don't recall.

24 Q. Okay. Well, they sent their memo to you.

1 Right?

2 A. Yes, they did.

3 Q. Okay. Did you send them the request?

4 A. I don't recall if I sent them the request.

5 Q. Okay. But you -- but a request was sent to
6 them. Right?

7 A. Apparently, yes.

8 Q. Providing them some data and site
9 information. Right?

10 A. That's what it looks like.

11 Q. Okay. I haven't seen that request.

12 A. I don't recall the request either, so. . .

13 Q. Okay. Well, I'd like to see that request. I
14 would ask that it be produced.

15 Are there any other consultants that you
16 worked with on this project that you neglected to
17 mention to me?

18 MR. SCHICK: Objection. Form.

19 A. I'm trying to remember everybody that I've --
20 that I've mentioned.

21 Q. (By Mr. Nidel) ELM, Arcadis.

22 A. ELM, Arcadis.

23 Q. HydroQual?

24 A. Yeah, HydroQual wasn't really on this

1 project. They were involved in the onsite work ending
2 in 2009, 2010.

3 Q. Right. Shaw?

4 A. Shaw and representatives of Shaw, primarily
5 Mike Cooper, was a Shaw employee.

6 Q. McVehil?

7 A. McVehil. He also suggested GHD and I tried
8 to clarify what GHD's role was in the project.

9 Q. Is that all you can think of?

10 A. The lab, we've talked about ALS and I believe
11 TestAmerica prior -- prior to that. Whether those are
12 consultant or not I'm not sure.

13 Q. Did you understand my question yesterday to
14 be only consultants that you then retained and engaged
15 for additional work after soliciting a proposal?

16 MR. SCHICK: Objection. Form.

17 A. When you asked me specifically about -- about
18 Integral, I frankly did not recall the very brief time
19 that Integral may have had interaction with us about
20 this project, and I apologize for that oversight. But
21 as I mentioned, they were only involved tangentially
22 for a very brief time and the actual work -- and this
23 was related to the ultimate development of the
24 transect exercise -- was done primarily by Geosyntec

1 and not Integral.

2 Q. (By Mr. Nidel) Okay. Was there a -- did you
3 send e-mails to Geosyntec?

4 A. Did I send e-mails to Geosyntec?

5 Q. Did you communicate with them by e-mail?

6 A. I have had e-mail interaction with Geosyntec.

7 Q. Okay. Who at Geosyntec?

8 A. My point of contact is Jeff Kurtz.

9 Q. How do you spell his last -- well, is it Jeff
10 with a J?

11 A. J-E-F-F, yes.

12 Q. And how do you spell his last name?

13 A. K-U-R-T-Z.

14 Q. Okay. And you're both working remotely so I
15 assume you guys send e-mails back and forth. Correct?

16 A. Yeah, Mr. Kurtz is in Denver and I'm in
17 Phoenix, so. . .

18 Q. Okay. I don't think I've seen any e-mails
19 with Mr. Kurtz, but I can verify that. Did Geosyntec
20 provide a proposal similar to what Integral did?

21 A. I believe they did.

22 Q. Did you provide Geosyntec's Integral memo --
23 did you provide Geosyntec Integral's memo?

24 A. I don't believe that would have been

1 appropriate for purposes of soliciting a proposal to
2 give them somebody -- another -- another firm's
3 thoughts.

4 Q. Did you pay Integral for the information they
5 provided in this memo?

6 A. I don't recall.

7 Q. If you did, you would have some invoicing or
8 billing information with respect to that. Right?

9 A. There would have been some invoicing, yes.

10 Q. Okay.

11 A. I don't recall whether we made them -- we
12 paid them for anything or whether this was a, you
13 know, proposal that was done on an anticipatory basis
14 of future work.

15 Q. Okay. The first paragraph, middle of that
16 paragraph it says, Additional metals may be useful for
17 delineating the extent of potential impacts from the
18 smelter stack emissions from the former USMR site. Do
19 you see that?

20 A. Where is that? I'm sorry.

21 Q. It's like the middle of the --

22 MR. SCHICK: The sentence actually
23 begins with However.

24 A. Okay. I see it now.

1 Q. (By Mr. Nidel) Integral was of the opinion
2 that additional metals would be useful for -- or may
3 be useful for delineating the extent of impacts from
4 the smelter stack.

5 MR. SCHICK: Objection. Form.

6 A. That apparently was Integral's position in
7 this letter.

8 Q. (By Mr. Nidel) Okay. Did you disagree with
9 that?

10 A. We didn't agree or disagree. This was
11 Integral's opinion.

12 Q. They talk in the Metals Selection section,
13 Metals recommended for additional reporting based on
14 the following criteria. One of the criteria was that
15 they would not likely sample above the safety standard
16 so they wouldn't trigger additional remediation. Do
17 you see that?

18 A. In the first bullet?

19 Q. Yep. Do you see that?

20 A. I do.

21 Q. Okay. And then the second bullet, the last
22 sentence says, Cadmium and zinc are most correlated to
23 soil copper concentrations. Do you see that?

24 A. I see where it says that.

1 Q. Okay. So, again, clearly you had provided
2 them access to your data. Right?

3 A. I believe they had -- they must have had
4 access to certain data. I don't know exactly what was
5 provided to them.

6 Q. On the right page there, the next page over,
7 it says, the last sentence before the table says, The
8 laboratory's non-negotiated cost for each additional
9 metal is \$10. Do you see that?

10 A. I do.

11 Q. Yesterday I asked you what the cost of each
12 metal was and you weren't sure, but does that refresh
13 your recollection it was about \$10?

14 MR. SCHICK: Objection. Form.

15 A. I mean, for purposes of this inquiry that
16 Integral made to the lab that's -- that's the number
17 that Integral reported.

18 Q. (By Mr. Nidel) Okay. What were you paying
19 for the lab, I think it was ALS or -- yeah, what were
20 you paying ALS per metal for your samples?

21 A. I don't know precisely.

22 Q. Okay. Do you know if it was more than \$10?

23 A. I don't know if it was more or less.

24 Q. You have no idea what the cost per metal was?

1 A. Not off the top of my head.

2 Q. Okay. But you did get a memo from Integral
3 in March of 2016 that said it was \$10. Right?

4 A. That's what this memo says.

5 Q. Did you check it out and see if that's in
6 fact what you were paying ALS?

7 A. No.

8 Q. Okay. The Integral recommendations were
9 never followed. Correct?

10 MR. SCHICK: Objection. Form.

11 A. As I -- as I mentioned, we chose not to go
12 with Integral and went with Geosyntec instead. So the
13 recommendations and work plan that Geosyntec used was
14 what the company moved forward with.

15 Q. (By Mr. Nidel) The dioxin testing that you
16 did onsite, was that initially -- there was a -- there
17 was a dioxin work plan that was drafted. Right?

18 A. When?

19 Q. I don't know. When you did -- before you did
20 that sampling. Right?

21 A. We prepared -- I mean, you asked me if a
22 dioxin work plan was prepared. I mean, dioxin is
23 something that's been looked at several times over the
24 history of the site so if you're referring to the most

1 recent dioxin sampling, yes, there was a work plan
2 prepared.

3 Q. Okay. And that work plan initially included
4 sampling for both metals and dioxin and then
5 correlating the metals results with the dioxin
6 results. Right?

7 A. I don't recall that specifically.

8 Q. Do you know if that was done?

9 A. I don't believe that there was an attempt to
10 correlate metals with dioxins as part of the sampling.

11 Q. Were metals tested for on those same sample
12 points?

13 A. I don't believe they were.

14 Q. Okay. Why not?

15 A. I don't know.

16 Q. It was part of your initial work plan to test
17 for metals and see that the metals correlated with the
18 levels of dioxins. Correct?

19 A. I don't recall if that was specifically part
20 of the work plan, but if -- you know, if what you're
21 saying is correct, I don't know why there was no metal
22 sampling done as part of the dioxin sampling.

23 Q. Okay. Would you agree that indications of
24 high metals concentrations might indicate that at

1 least there were smelter impacts there and then it
2 would help you assess whether the dioxin was or was
3 not from the smelter?

4 MR. SCHICK: Objection. Form.

5 A. Well, the -- the sampling that we had done on
6 the onsite that was being done as part of the 2016
7 remedial action report, the one that we just discussed
8 earlier that was submitted on or before May 16th, we
9 had delineated metals adequately to the satisfaction
10 of the LSRP so there was really no need to conduct
11 additional metals sampling. So I'm assuming that was
12 likely why we did not do metals sampling as part of
13 the dioxin sampling and only did dioxin sampling.

14 Q. (By Mr. Nidel) There was a risk that if you
15 sampled for metals you might identify contamination
16 outside of previously delineated area. Right?

17 MR. SCHICK: Objection. Form.

18 A. We had delineated the metals to the
19 satisfaction of Mr. McNally.

20 (Exhibit No. 108 marked.)

21 Q. (By Mr. Nidel) Hand you Exhibit 108. Can
22 you identify Exhibit 108?

23 A. It looks like some of my handwritten notes.

24 Q. Okay. Do you keep, like, some type of a work

1 log or a journal?

2 A. I did and, you know, that's, you know,
3 essentially what this is and I kept that up until the
4 time of about 2016 and then I became a much, you know,
5 more -- it's hard to read my own handwriting at times
6 and I found using OneNote to be a more effective way
7 to take notes.

8 Q. The redactions on here, do you take notes --
9 did you take notes in your former notebook about other
10 projects that you're working on?

11 A. Yes.

12 Q. Okay. I assume that's why this was redacted
13 or these portions were redacted?

14 A. That's -- that's my understanding.

15 Q. Okay. When did you provide these handwritten
16 journals to counsel in the case?

17 A. I believe it was several weeks ago.

18 Q. Okay. That would be in that one- to
19 three-month range that we talked about earlier?

20 A. Probably closer to one month.

21 Q. Okay. But more than one month, but you're
22 not sure beyond that?

23 A. It was probably about a month.

24 Q. Okay. If you turn to page Bates numbers 022?

1 A. 22, yes.

2 Q. There's -- I think I can read this, but
3 probably best if I let you read it first. It's the
4 third sort of entry there. I think it says no single
5 sample is the first bit. If you can just read that
6 sentence so I make sure I don't screw it up.

7 A. No single sample in and of itself means there
8 is a problem or an impact from the smelter.

9 Q. Okay. What do you mean by that?

10 A. I think it means what it says, that, you
11 know, the mere exceedance of numerical standard in any
12 one particular sample obtained anywhere within the AOC
13 does not necessarily indicate that that exceedance is
14 smelter derived, that there are likely other sources.

15 Q. Okay.

16 A. I think that's what I was attempting to say
17 there.

18 Q. Okay. And there's also variability from
19 location to location consistent with that paragraph in
20 your conceptual site model. Correct?

21 A. Yes.

22 Q. Okay. And there was also some instances of
23 historical fill and things like that. Right?

24 A. Say that again, please.

1 Q. There were instance of historical fill or
2 redevelopment, you know, things that, as we talked
3 about, the northwest corner that changed?

4 A. Yeah, there's all different sources of those
5 constituents within the AOC.

6 Q. Okay. And then can you read the next
7 sentence for me, please?

8 A. Important to focus on mass, not individual
9 analytical numbers.

10 Q. Okay. So what does that mean?

11 A. Yeah, I'm not sure what I was referring to on
12 that -- on that particular note.

13 Q. I mean, it sounds to me like you're saying
14 that you're going to look at the big picture. Does
15 that seem fair, on mass?

16 MR. SCHICK: Objection. Form.

17 A. Yeah, I'm not sure because it's in relation
18 to a review of comments provided by the Borough, so
19 I'd kind of need to know what the Borough's comments
20 were so I could put this into context.

21 Q. (By Mr. Nidel) Well, does the prior sentence
22 put it into context that you're not focusing on
23 individual specific single sample results but looking
24 on mass?

1 MR. SCHICK: Objection. Form.

2 A. Yeah, I don't know if one -- one sentence
3 follows the other or not. Yeah, I'd have to, you
4 know, refer back to what the specific Borough comment
5 was to understand the context of what I -- what I
6 wrote right there.

7 Q. (By Mr. Nidel) Did you ever do any
8 assessment of the number of parcels that contained an
9 exceedance or not an exceedance, so just whether the
10 parcel had an exceedance or didn't have an exceedance?

11 A. Are you asking whether -- I mean, are you
12 saying that if a parcel had an exceedance of any
13 number at any sample point as compared to a parcel
14 which had an exceedance at even -- for one constituent
15 at even any one sample point?

16 Q. If -- if a sample -- if a parcel had any
17 exceedance of any of the three metals that we're
18 talking about, period, right? So if when you tested
19 that parcel you found any exceedance in the 10 or 20
20 or whatever it was samples that you tested on that
21 parcel.

22 A. I'd say let me answer it in a different way
23 and you can tell me if I'm being responsive or not.
24 If you're asking whether -- let's -- let's take a

1 particular parcel with one use area that ordinarily we
2 would have then taken 20 samples. 10 for the first
3 depth interval and 10 for the next lower interval.
4 That would be the starting point. If you're asking
5 whether we have any parcels that would, you know,
6 essentially light up green for that entire area, I
7 don't know if we do, but if we do they are very
8 limited in number. Probably could count them on two
9 hands.

10 Q. Okay. So you would agree that the samples
11 that have at least one exceedance predominate the area
12 of the AOC?

13 MR. SCHICK: Objection. Form.

14 A. I'd say that based on the AOC sampling a
15 signature majority of the use areas -- let me use use
16 areas -- have one or more exceedances.

17 Q. (By Mr. Nidel) Okay. And I think based on
18 your analysis, your estimate was somewhere around 250
19 -- you can correct me if I'm wrong -- 250 of those
20 tested have exceedances that trigger remediation.
21 Correct?

22 A. Based on the use of the 95 UCL, that's
23 probably the -- you know, the number, maybe slightly
24 more than 250, that will require remediation in some

1 fashion.

2 Q. Okay. And that's out of about 300 total
3 PPINs. Right?

4 A. That's right.

5 Q. If we go back to Exhibit 99 and, again,
6 excluding that area in the northwest corner and I
7 think your testimony was that, you know, if there are
8 parcels that light up green across the board you can
9 count them on a -- was it one hand or two hands?

10 A. I suggested two hands.

11 Q. Okay.

12 A. But --

13 Q. So something between --

14 A. It could be --

15 Q. -- zero and 10?

16 A. A fairly small number.

17 Q. Okay. So would you agree that within this
18 AOC area as envisioned here, that the parcels that
19 have an exceedance predominate within that area?

20 A. Again, based on this drawing, and I don't
21 know which -- what depth interval and whatnot that
22 these, you know, sample locations are defined as red
23 or green, based on this map the predominant parcels on
24 this map indicate that there is at least one sample

1 that exceeds a standard for -- exceeds a New Jersey
2 standard.

3 Q. And in the transect data that we have a
4 representation of, would you agree that almost all of
5 those parcels that were tested, if not all of them,
6 contain at least one exceedance?

7 A. Yeah, based -- based on this figure here it
8 looks like there's only I would say two parcels that
9 are green.

10 Q. Okay. We see two green and I will concede we
11 can't get to the level of individual results, but
12 there are -- where are the two greens? There's one
13 within the 200-foot boundary. Is that what you're
14 referring to?

15 A. There's one there and then there's one along
16 the westernmost transect near the farthest out sample
17 location.

18 Q. Okay. Just so we don't get too far in a
19 record that's not clear, could you just circle -- I
20 don't know what pens you have over there. I don't
21 know if they match or clash with --

22 A. Like the fuchsia?

23 Q. I like that; Steve it's going to frustrate.
24 But if you could just circle those two greens that

1 you're referring to just so the record is clear.

2 A. (Complying.)

3 Q. Okay. And just the only reason I wanted you
4 to mark those is because we don't have the flexibility
5 to zoom in and see. And I don't think you're trying
6 to assume one way or the other and I don't know the
7 answer, but those may be individual samples within a
8 parcel or they may be the only sample in a parcel, but
9 your testimony was that there only appear to be two
10 green areas and if I could clarify those may or may
11 not be completely green parcels or may not be. Right?

12 A. Excuse me, and there may be a third.

13 Q. Okay.

14 A. If you look in the centermost.

15 Q. Yep, I see it. Very top?

16 A. Very top, yeah.

17 MR. SCHICK: Got it.

18 MR. NIDEL: You guys are good.

19 Q. (By Mr. Nidel) I tried to -- I didn't print
20 this one.

21 A. Yeah, this is very hard to see.

22 Q. I did take the screenshot.

23 So okay. There are three -- three -- three
24 clean locations. Those may or may not represent

1 completely clean parcels. Is that correct?

2 A. That's correct. It's really hard to tell
3 from this -- from this figure.

4 Q. Okay. But you would agree that the locations
5 that have an exceedance predominate out in the
6 transect area. Is that fair?

7 A. There are more reds than greens.

8 Q. Okay.

9 MR. NIDEL: I've got one for you, too.

10 MR. SCHICK: Okay. Thanks.

11 MR. NIDEL: I was going to really upset
12 the Court Reporter if I didn't staple that.

13 (Exhibit No. 109 marked.)

14 A. I need to ask, can I also borrow your
15 stapler?

16 Q. (By Mr. Nidel) Sure.

17 A. The first exhibit you gave me today wasn't
18 stapled together.

19 Q. Yes. That's thanks to --

20 A. I want to keep them together. Thank you.

21 Q. If you had a box like that. I'm sorry.

22 I handed you Exhibit 109 stapled. Can you
23 identify Exhibit 109?

24 A. 109 looks like a series of slides that is

1 titled Compliance Averaging Examples, Carteret
2 Townsite.

3 Q. Okay. Do you know who prepared that
4 document?

5 A. I believe it was prepared by Arcadis.

6 Q. Okay. Do you know who at Arcadis?

7 A. It was likely prepared by -- at least the
8 content by Ms. Szegedi and I'm sure she had a graphics
9 person assist her with making it look professional.

10 Q. Do you know what this PowerPoint was used
11 for?

12 A. It provided information on various examples
13 of how compliance averaging was used or would be used
14 to achieve the remediation goals.

15 Q. Okay. And does the represent -- the examples
16 in this, do they represent how it was used at the --
17 in the cleanup in the neighborhood?

18 A. I believe that's -- that's correct.

19 (Exhibit No. 110 marked.)

20 Q. Okay. I hand you Exhibit 110 to your
21 deposition. Exhibit 110 is entitled USMR 12-4-13
22 Review Meeting, Bates labeled 836109 and it looks like
23 a PowerPoint-type document. Is that correct?

24 A. Yes, that's what it looks like.

1 Q. Have you reviewed that document?

2 A. I've seen this document, yes.

3 Q. Okay. Did you see it in preparing for this
4 deposition or did you see it as part of your
5 responsibility for the site or both or. . .

6 A. I'd say both.

7 Q. Okay. So what is -- what was this document
8 for?

9 A. This was, as I recall, a presentation that
10 was used for the internal group of USMR folks that
11 were involved in the development and implementation of
12 the soil program.

13 Q. Okay. If we -- if we turn to -- well, if you
14 turn to Page 10?

15 A. Uh-huh.

16 Q. We had some discussion yesterday about Dunk's
17 modeling and you tried to point out or were pointed
18 out that there was an air model, not a deposition
19 model. But in this assessment of the conceptual site
20 model in support of the conceptual site model, you
21 reference a plume rise and dispersion trend from a
22 SCREEN3 modeling as well as some of Dunk's modeling.
23 Correct?

24 A. Yes, that's what the document says.

1 Q. Okay. And the modeling from -- well, the
2 modeling that you used from Dunk was one of his more
3 conservative or one of his later model runs with
4 decreased emissions. Correct?

5 MR. SCHICK: Objection. Form.

6 Q. (By Mr. Nidel) Compared to what we saw
7 yesterday?

8 A. Yeah, I'm not -- I mean, I remember seeing
9 this, but I'm not sure if it was the same one that we
10 looked at yesterday or not. The date of the model,
11 the -- whether it was conservative or not, I don't
12 know. It's just -- this is just giving a model
13 output.

14 Q. Okay. Well, you recall that my Dunk modeling
15 showed lead air quality impacts up to I think we said
16 35 kilometers or thereabouts and it was exceeding the
17 ambient air quality standard up to 10 kilometers. Do
18 you recall that?

19 A. Let's see. Okay. Can you -- can you repeat
20 that because I'm looking at the -- on Page 10, the
21 lead line.

22 Q. Yep.

23 A. Which I believe the ambient air quality
24 standard for lead is 1 1/2 micrograms per cubic meter.

1 Q. Yep.

2 A. So that would correspond to roughly somewhere
3 between 2,500 and 3,000 meters.

4 Q. Yeah, that looks about right.

5 A. Okay. So -- okay. And can you ask the
6 question again?

7 Q. Yeah. The modeling that we looked at
8 yesterday had a similar analysis, which I appreciate,
9 but that curve didn't approach the 1.5 until it was
10 about at 10 kilometers.

11 A. Yeah, I seem to recall that from yesterday.

12 Q. Okay.

13 A. This was just looking very similar to what we
14 looked at yesterday.

15 Q. Okay.

16 A. So I wanted to make sure.

17 Q. Okay. Who prepared this guy?

18 A. I don't know who prepared this presentation.

19 Q. Okay. But you used it to support your
20 conceptual site model. Correct?

21 A. Yes.

22 Q. Okay. And the model I showed you was the
23 same method of modeling. Correct?

24 MR. SCHICK: Objection. Form.

1 Q. (By Mr. Nidel) With different emissions?

2 A. I'm not sure if this model was done using the
3 same model as the one you showed me yesterday, but
4 they're both modeled emissions.

5 Q. Okay. And they're both done by Dunk and the
6 graphs that were generated with the same albeit with
7 greater extent of plume. Right?

8 A. They look similar. Whether he used the exact
9 same dispersion model, I don't know without. . .

10 Q. Okay. Was the purpose of the conceptual site
11 model to model concentrations or to predict impacts
12 from the -- from any specific period of time or was it
13 for the entire history of the site?

14 A. Say that again.

15 Q. Was it -- was the purpose of the conceptual
16 site model to try and estimate the impacts from the
17 entire history of the facility or was it just for some
18 subset of years or time period?

19 A. Given that the source was in a -- you know,
20 in a particular, you know, general area throughout the
21 operation of the facility, the model which showed
22 emissions going -- you know, being high relatively
23 close to the source and tapering off quickly with
24 distance to the source, I don't think that the

1 conceptual site model was necessarily limited to any
2 particular time period of operation. I think it was
3 attempted to be generally represented --
4 representative of how emissions would move away from
5 the facility regardless of the -- of the operation.

6 Q. But you agree, I think we had this discussion
7 yesterday, the greater in terms of weight of emissions
8 the further that declination curve would extend.
9 Correct?

10 MR. SCHICK: Objection. Form.

11 A. The further the weight of the emissions.

12 Q. (By Mr. Nidel) The greater the weight of
13 emissions. Okay. So the curve may look the same, but
14 you're going to be at 10 kilometers when you cross
15 instead of at 2 1/2 like you just saw on this one.
16 Right?

17 MR. SCHICK: Objection. Form.

18 A. There -- it would -- it would depend on other
19 factors, as well, and, again, I'm not a -- I'm not an
20 air modeler, but, you know, just because there's
21 increased mass going out the stack it depends on
22 stack's velocities, meteorological conditions. So I
23 mean, as I understand, you know, this Dunk model was
24 Dr. Dunk's effort to model ambient air quality

1 concentrations using the input parameters that, you
2 know, he used, which were, I believe, more than likely
3 consistent with the operation at the time.

4 But what's important is that regardless of
5 the operation, the model indicates that expected
6 concentrations or emissions from -- I'm sorry --
7 emissions from the source will drop out fairly quickly
8 close to the source and taper off. That's really the
9 crux of the conceptual site model as it's applied to
10 air deposition.

11 Q. Okay. Is 10 kilometers considered close to
12 the smelter?

13 A. From what perspective?

14 Q. From USMR's perspective.

15 A. In relation to what, though?

16 Q. The conceptual site model.

17 A. You know, again, I think I -- I think I
18 mentioned this yesterday, this model, as well as the
19 model that we looked at yesterday, is an ambient air
20 model and it does not project impacts to soil from
21 those emissions. So the mere modeled determination
22 that there is a certain concentration of, you know,
23 lead, total particulates, whatever, at a certain
24 location distant from the source does not necessarily

1 tie to a soil concentration. What I'm saying is you
2 can't model a specific soil concentration from a
3 specific air quality -- ambient air concentration.

4 Q. I don't doubt that, but you used the concept
5 to support your conceptual site model. Correct?

6 A. We used the concept to support the conceptual
7 site model, that's correct.

8 Q. And when you -- then you did a deposition
9 model. Right?

10 A. (No response.)

11 Q. The McVehil model?

12 A. Umm.

13 Q. Did you or did you not?

14 A. I'm looking.

15 Q. No. Did you do one?

16 A. (No response.)

17 Q. Did you do one?

18 A. I'm not sure if the McVehil model was a
19 deposition model or not, the way you're calling it.

20 Q. Okay. Well, if you turn to Page 11 it says,
21 Preliminary Deposition Modeling, May 2012 - A
22 preliminary deposition modeling effort was performed.
23 Is that the McVehil model?

24 A. Okay. I believe that refers to the McVehil

1 model.

2 Q. Okay. And then it also goes on to say, third
3 bullet point, Although the preliminary results were
4 consistent with the EPA screening model and Dunk
5 modeling results -- do you see that?

6 A. Yes.

7 Q. Okay. So there was nothing at the time that
8 concerned you about relying on the screening model,
9 the Dunk model, and those were consistent with the
10 deposition model. Right?

11 A. It -- I mean, it says what it says.

12 Q. That they're consistent?

13 A. It says the preliminary results are
14 consistent with the EPA screening and the Dunk
15 modeling results.

16 Q. Okay.

17 A. And I think what the reference thereto is,
18 you know, the emissions are highest in close proximity
19 to the facility and they taper off.

20 Q. Okay. Okay. And they're not consistent with
21 the modeling that Dunk did in the early 1980s that
22 showed a 10 kilometer concentration. Right?

23 A. I believe that it's -- it's still -- it still
24 demonstrates consistency in that the highest emissions

1 are close to the facility and they taper off with
2 distance.

3 Q. But you're saying they -- I get it. They
4 taper off with distance.

5 A. Okay.

6 Q. That's what the equations say.

7 A. Uh-huh.

8 Q. But you're saying they taper off in close
9 proximity to the facility, and my question is: Is 10
10 kilometers considered by U.S. Metals to be close
11 proximity?

12 MR. SCHICK: Objection. Form.

13 A. 10 kilometers is, you know, what was, you
14 know, part of the output of the earlier Dunk model
15 that we discussed yesterday.

16 Q. (By Mr. Nidel) Okay. And is that in close
17 proximity to the smelter?

18 A. Again, it is -- it is what it is. It's a --
19 it's a -- it's a model.

20 Q. It's a model. Is that close proximity, 10
21 kilometers?

22 A. (No response.)

23 Q. Is that what USMR considers close proximity?

24 A. For those particular numbers that Dr. Dunk

1 used, 10 kilometers is relatively farther than the
2 information he generated on the subsequent modeling.

3 Q. Okay. When he added emission controls and
4 decreased those pollutant emissions. Right?

5 A. Again, I don't know what went into, you know,
6 the first versus the second Dunk model, but assuming
7 that the same model was used with the same input
8 parameters, the same meteorological conditions,
9 whatever inputs that Dr. Dunk used in the second model
10 showed less of an impact on ambient air quality -- on
11 modeled ambient air quality than the earlier modeling
12 exercise.

13 Q. Okay. This document shows that you used
14 three models to support your conceptual site model:
15 One, the SCREEN model; two, Dunk's air quality model;
16 and three, the McVehil model. Correct?

17 A. That's correct.

18 Q. Okay. And you don't know the inputs to the
19 Dunk model. Correct?

20 A. No.

21 Q. You don't know the inputs to the McVehil
22 model. Correct?

23 A. Not off the top of my head.

24 Q. Okay. I haven't been given the inputs to the

1 McVehil model and you don't know the inputs to the
2 SCREEN model. Correct?

3 MR. SCHICK: Objection to sidebar.

4 A. No.

5 Q. (By Mr. Nidel) Okay. And Dunk did other
6 modeling, which we discussed?

7 A. No, beyond the inputs that are described on
8 Page 9.

9 Q. Okay. You -- you -- described on Page 9?

10 A. Yes.

11 Q. Does that give the amounts of emissions?

12 A. It -- in looking at the chart on Page 9, it
13 looks like there are various input parameters listed
14 and the Y axis represents micrograms per cubic meter
15 and the X axis is distance from the source.

16 Q. Okay. I'm mainly just asking about the
17 amounts. So I call that an emissions inventory. I
18 think that's what it is in the modeling, but I was
19 corrected. So when I say inputs I mean the amounts of
20 emissions. I would say volume but that's probably
21 incorrect. It's probably the mass of emission.
22 Right?

23 A. This -- this model is not a mass model. It's
24 a concentration model.

1 Q. Right. But concentration is mass by volume.

2 Right?

3 A. Yes.

4 Q. Okay. So it is a mass model. It's a mass by
5 volume model. Right?

6 A. Generally, yes.

7 Q. Okay. What was the mass that was modeled
8 being emitted to generate any of these three models,
9 if you know?

10 A. I don't know.

11 Q. Okay. Do you know what the mass was being
12 modeled in the model that I shared with you yesterday?

13 A. No.

14 Q. Okay. Do you know which of the masses that
15 were being modeled -- forget about the modeling method
16 or the stack temperature or the stack height -- but
17 these three models were consistent. There was a
18 fourth model I showed you that showed emissions going
19 out approximately four times greater of a distance.
20 Do you know which of those four models used an
21 assumption of the mass of emissions that most closely
22 represented the historical operation of the smelter
23 site?

24 A. I don't know.

1 Q. Okay. Wouldn't you need to know that to pick
2 which one was reflective of your source to validate
3 your conceptual site model?

4 A. Again, we used the general dispersion models
5 that were prepared by Dunk and by McVehil to
6 essentially hypothesize that the concentrations of
7 emissions from the source as they would contribute to
8 soil metal concentrations would be highest closest to
9 the facility and would taper off. So that -- that
10 general theory was used to identify the ISDA and
11 subsequently the AOC.

12 We have continued to state that, you know, we
13 will and we are validating the boundaries of the AOC
14 to determine if they are appropriate or not and that
15 boundary may or may not be modified moving forward.
16 That does not take away from the conceptual air model.
17 It's the company's position that gathering actual data
18 is more important than essentially trying to hang your
19 hat on a numerical model that's based on conditions
20 which are uncertain.

21 Q. There's also -- there was also concern with
22 the air model that related to something else. Right?

23 MR. SCHICK: Objection. Form.

24 A. What was that?

1 Q. (By Mr. Nidel) Related to the fact that it
2 would demonstrate that emissions from the smelter were
3 also going to other places other than Carteret.
4 Right?

5 MR. SCHICK: Objection. Form.

6 A. Which -- which air model are you talking
7 about?

8 Q. (By Mr. Nidel) The 2012 McVehil model.

9 A. I guess I'm not, you know, picking up on
10 where you're going with this.

11 Q. I'm going to Staten Island.

12 A. I don't think that there's ever been an
13 allegation by USMR that the wind only blows in one
14 direction.

15 Q. Okay. But one of the concerns that you had
16 specifically in evaluating your conceptual site model
17 using a model was that if you hung your hat on a model
18 that model might haunt you later because it showed
19 emissions going somewhere other than Carteret. Right?

20 MR. SCHICK: Objection. Form.

21 A. That's -- you know, that's a possibility.

22 Q. (By Mr. Nidel) Do you recall that
23 discussion?

24 A. I vaguely recall that as being something that

1 got discussed several years ago, probably five years
2 ago.

3 Q. Okay. Was that discussed with the LSRP?

4 A. I don't believe so.

5 Q. Just to be clear, U.S. Metals does not know
6 the emission amounts that were modeled in any of those
7 four models that we just discussed. Correct?

8 A. The emission amounts?

9 Q. Yeah, amounts of emissions that lead to
10 results that three of them are here and one of them we
11 discussed yesterday. I asked you if you knew, you
12 said no. Because you're testifying on behalf of the
13 company I want to make it clear that USMR does not
14 know the amounts?

15 A. Off off, I don't know whether -- whether
16 that's true or not.

17 Q. Okay. Let me ask it this way: USMR did not
18 consider in its evaluation of the conceptual site
19 model the amounts that went into any of those three
20 models or the fourth Dunk model because it did not
21 know for purposes of evaluating the conceptual site
22 model?

23 A. For purposes of -- I don't think it was
24 important to know the exact amount of mass that was

1 used for the model. The models all show, again, the
2 concentrations of emissions are highest close to the
3 facility, they drop out the most quickly and they
4 taper off as you move away from the facility. The
5 position of USMR is that the best approach to
6 determining the extent of impacts from the facility is
7 to obtain actual soil data.

8 Q. Okay. And there are people that live -- it's
9 in between the transects. Right?

10 A. Yes.

11 Q. There are people that live north of the
12 transects. Right?

13 A. Yes.

14 Q. There are people that live, as we discussed,
15 off to the left of the transects. I guess that's
16 west?

17 A. Yes.

18 Q. Okay. Those people haven't had their
19 properties tested. Right?

20 A. Not to my knowledge.

21 Q. Okay. Not by U.S. Metals. Right?

22 A. Not by U.S. Metals.

23 Q. Not by Freeport Minerals. Right?

24 A. Not by Freeport Minerals.

1 Q. Okay. Should they be given actual data that
2 shows whether or not they have been impacted by your
3 conceptual site model emissions?

4 MR. SCHICK: Objection. Form.

5 A. I'm not sure what actual data you're
6 referring to.

7 Q. (By Mr. Nidel) What was that?

8 A. I responded to your question with I'm not
9 sure what actual data you're referring to.

10 Q. Okay. The actual data, what levels of lead
11 and arsenic are on their property.

12 A. Their properties, to my knowledge, have not
13 been sampled.

14 Q. Okay. So the people within the ISDA that was
15 determined -- the boundaries of which were determined
16 by your conceptual site model that was determined by
17 modeling in part -- well, let me ask you this: The
18 extent of those transects, that was determined by the
19 modeling. Right? 1,600 meters. Right?

20 A. Yes, if you refer back to the information
21 that was provided by Geosyntec you can see the basis
22 for the extent of the transects.

23 Q. Okay. So you did use the model to determine
24 how far you should go sample. Right?

1 A. We used a combination of the model and the --
2 what word am I looking for here? -- the metal ratios
3 in the samples.

4 Q. Okay. Well, the model predicted the 1,600
5 meters and I believe I saw a diagram -- we might be
6 able to find it -- that shows those transects and the
7 stopping at a 16-meter arc. Do you recall that?

8 A. Yeah.

9 Q. Okay. So the extent of the transects was
10 determined by the modeling. Right?

11 A. Along with the metals ratios. They go
12 together.

13 Q. How did the metals ratios lead to 1,600?

14 A. I think if you -- you have to refer to the
15 Geosyntec, the drawings that are in their PowerPoint
16 presentation.

17 Q. Okay. Those drawings give you 1,600 meters?

18 A. Yeah, they point to that being the outermost
19 extent of the proposed transects.

20 Q. Okay. It also -- the modeling also depended
21 on particle size. Right? Page 12 where the air
22 dispersion model talks about how copper smelters,
23 Large particles are greater than 2 microns in size.
24 Copper smelters emissions factors for large particles

1 (greater than 2 microns) from converters tend to be 4
2 times greater than for less than 2 microns. Do you
3 see that?

4 A. Yes.

5 Q. Okay. We looked at converter particle size
6 yesterday. Do you recall that? West converter
7 particle size?

8 A. Vaguely.

9 Q. Okay.

10 A. We've covered a lot of ground.

11 Q. Correct. We can go back and look at that,
12 but do you know if the West converter was emitting
13 particles that were greater than 2 microns at a rate
14 that was four times greater than the amount of
15 particles that were less than 2 microns?

16 A. I don't know. It looks like that is a
17 generic statement based on some EPA emission factors.

18 Q. Right. Why wasn't actual site information
19 used, given the fact that USMR had that information?

20 MR. SCHICK: Objection. Form.

21 A. Where -- I'm not -- I'm not sure that USMR
22 had that information. The reference in the last
23 bullet on Page 12 is from an EPA document.

24 Q. (By Mr. Nidel) Oh, man. I'm talking about

1 the document I used yesterday which showed the
2 particle size for the west converter at the USMR
3 Carteret facility. And you recall discussing that.
4 Right? I know you --

5 A. You have to refresh my memory.

6 Q. -- may not recall the exact numbers.

7 A. I don't recall the exact numbers.

8 Q. Okay. But you did nothing to confirm that
9 the particle size that was used for the modeling that
10 did two things: One, confirm your conceptual site
11 model; two, estimated how far into Carteret you needed
12 to sample transects was consistent with the actual
13 USMR emission data. Right?

14 A. Again, we -- we used the model as a general
15 basis to show what a conceptual site model for air
16 deposition would look like. Based on that, the ISDA
17 and subsequently AOC areas were prescribed and, again,
18 it's the opinion of the company that the best way to
19 determine what impacts are and where those are is
20 through actual sampling.

21 Q. Okay. Well, I'm going to hand you the
22 Exhibit 32 from yesterday where the cupola converter
23 emissions particulate distribution is and you can see
24 that, what is it, 64 percent is between zero and .6

1 microns?

2 A. I see that.

3 Q. Okay. And what's the next, it's like .6 to
4 1.2 or 3, and what percentage is that?

5 A. It's .66 to 1.35 and it's 18.1 percent.

6 Q. Okay. So 64 and 18. So that's, I don't
7 know, around 80 percent were actually almost less than
8 1. Right? Less than 1 1/2. Right?

9 A. Based on this -- these particular sample --
10 or this particular sample, yes.

11 Q. Okay. So what data is best reflective of
12 USMR's operations, data from a generic table from EPA,
13 AP-42, or data that was actually tested by an employee
14 at U.S. Metals on the facility that you are modeling?

15 A. Again, a model is a model and the best way to
16 actually determine what the soil metal concentrations
17 are are to actually obtain those samples rather than
18 relying on a model.

19 Q. Okay. But the people outside 1,600 meters,
20 they don't have those samples. Right?

21 A. That's correct. There has been no sampling
22 beyond the boundaries of the AOC but for the
23 transects.

24 Q. Okay. What tells you that the people that

1 are in between the transects or outside the distance
2 of the transects don't have lead levels that might be
3 1,200 parts per billion on the surface of their soil
4 and they have small children that like to play in the
5 yard?

6 MR. SCHICK: Objection. Form.

7 A. We don't know what the soil concentrations
8 are for yards that have not been sampled.

9 (Exhibit No. 111 marked.)

10 Q. (By Mr. Nidel) I hand you Exhibit 111.
11 Exhibit 111 is a -- it starts with an e-mail from
12 Stanton Curry, 5/17 of 2012. Is that right?

13 A. Yes.

14 Q. It's got an e-mail from John Gilpin at
15 McVehil. Do you see that?

16 A. Okay. I see that.

17 Q. Does that refresh your recollection as to who
18 John Gilpin is?

19 A. Actually, I've never interacted with Mr.
20 Gilpin, so I mean, it's -- this e-mail is from Mr.
21 Gilpin but I've never dealt with him.

22 Q. Okay. If you turn to Page 375?

23 A. (Complying.)

24 Q. This is the modeling that you did, the

1 McVehil model. Right?

2 A. It is.

3 Q. Okay. And you see those isopleths, the
4 concentration of the plume?

5 A. I do.

6 Q. Okay. And you see how it goes out to
7 Roosevelt there?

8 A. I do.

9 Q. Okay. Why do the -- why do the depiction of
10 the data in this slide here stop at the 50 -- the 50
11 grand per meter squared isopleth?

12 MR. SCHICK: Objection. Form.

13 A. I don't know.

14 Q. (By Mr. Nidel) Okay.

15 A. It might be something to ask Mr. Gilpin.

16 Q. Well, if you look at the next slide there it
17 shows that there -- it could actually depict a 25 and
18 a 20 isopleth. Right?

19 A. Well, there -- you're talking about Bates
20 376?

21 Q. Yeah.

22 A. Yeah, there's a -- there's a 25 isopleth and
23 a 20 isopleth on that particular graph, but the model,
24 it's two separate runs with two separate scenarios.

1 So I'm not -- it's not necessarily apples to apples
2 and I don't know why the ranges on one figure are
3 different from -- from another.

4 Q. I'm not -- I'm not trying to get you to
5 compare apples to apples. I'm just asking isn't it
6 true that beyond this 50 isopleth the model would also
7 generate data that's at 25 and 20 and that would go
8 further and further into Carteret. Right?

9 A. Again, I'm not a modeler, but I would -- I
10 wouldn't disagree with that.

11 Q. Who made the decision to shut down the
12 McVehil modeling effort?

13 MR. SCHICK: Objection. Form.

14 A. The -- you know, the interaction with
15 McVehil, I'm sorry, but it was before I was directly
16 involved so I'm not -- I'm not aware of the modeling
17 being shut down or, if it was, what the circumstances
18 were.

19 Q. (By Mr. Nidel) Okay. Well, you're here as a
20 corporate rep, thankfully, and so if your answer is
21 you don't know it may be that you don't know, but to
22 the extent that you weren't there, that's not my
23 question. So --

24 A. Then --

1 Q. -- who shut down the McVehil model?

2 MR. SCHICK: Objection. Form.

3 A. I don't -- I'm not aware that the McVehil
4 model was shut down.

5 Q. (By Mr. Nidel) But you are aware that there
6 became a concern that the modeling might show other
7 offsite impacts. Correct?

8 MR. SCHICK: Objection. Form.

9 A. Based on -- based on these figures, you know,
10 there -- there are impacts in different directions.

11 MR. NIDEL: That's the document. Okay.

12 (Exhibit No. 112 marked.)

13 Q. (By Mr. Nidel) I've handed you Exhibit 112.

14 A. Yes.

15 Q. Okay. Exhibit 112 is the only other McVehil
16 reference that I have. It's an e-mail from Vajira to
17 Mike Cooper.

18 A. Yes.

19 Q. And cc'ing you. Right?

20 A. Yes, among others.

21 Q. Okay. Who is -- who is Mike Cooper?

22 A. Mike Cooper was a consultant that we used
23 early on in the project. He was originally employed
24 by Shaw.

1 Q. Okay. Who was he then employed by? What's
2 MCENVC?

3 A. He became a sole proprietor but we continued
4 to use him.

5 Q. Okay. Why didn't you mention Mike Cooper?

6 MR. SCHICK: He mentioned Shaw.

7 A. I think I did.

8 MR. NIDEL: Yeah, but Mike Cooper had
9 his own company that he just testified he continued to
10 employ.

11 A. I think I mentioned Mike Cooper earlier, as
12 well.

13 Q. (By Mr. Nidel) Okay. What's MCENVC?

14 A. I believe it's part of Mr. Cooper's e-mail
15 address in January of 2014.

16 Q. What's his company called?

17 A. Mike Cooper Environmental Consulting.

18 Q. Okay. Sounds right, MCENVC.

19 MR. NIDEL: Bless you. Someone sneezed
20 or did I make that up?

21 MR. WILKINSON: No, no.

22 Q. (By Mr. Nidel) It gives the two scenarios
23 for each run that we just looked at, hundred-foot
24 stack and a 225-foot stack. Right?

1 A. Yes, that's what it says.

2 Q. Okay. No 400-foot stack. Right?

3 A. There's no 400-foot stack referenced here.

4 Q. Okay. Did McVehil model a 400-foot stack?

5 A. Not -- not according to this information.

6 Q. Okay. It provides production numbers but

7 does not provide emissions estimates. Correct?

8 A. This memo does not -- or this e-mail does
9 not.

10 (Exhibit No. 113 marked.)

11 Q. Mike Cooper went on to send -- I'm going to
12 hand you another exhibit. 113. Exhibit 113 starts
13 with an e-mail from Vajira to Mike Cooper copying or
14 blind -- sorry, cc'ing you. AirMod input files. Do
15 you see that?

16 A. I do.

17 Q. And it looks like Mike Cooper sent AirMod
18 files in 2014. Do you know what modeling Mike Cooper
19 was doing?

20 A. I'm not aware that -- that Mike Cooper did
21 modeling. The input files that he's mentioning may be
22 the ones that were used by McVehil.

23 Q. Okay. So what modeling files was he sending
24 to Vajira?

1 MR. SCHICK: Objection. Form.

2 A. Have to go back and look. They're not --
3 they're not attached to this e-mail.

4 Q. (By Mr. Nidel) Okay. I don't have the
5 AirMod files, so -- or I don't think I do. I can't --
6 I haven't found them. So it looks like somebody has
7 them, so I guess I'll work on that.

8 MR. NIDEL: Does somebody want to take a
9 break? I don't know how long it's been.

10 Q. (By Mr. Nidel) When did -- when did the
11 smelter convert to a secondary smelter, if you know?

12 MR. SCHICK: Objection. Asked and
13 answered.

14 A. I don't know the precise year, but I believe
15 it was sometime in the early '60s. Mr. Fenn probably
16 provided a more definitive date.

17 (Exhibit No. 114 marked.)

18 Q. (By Mr. Nidel) Handed you Exhibit 114. Who
19 would these townsite strategy meetings be presented
20 to?

21 A. Generally, these were internal meetings with
22 a group of USMR and its consultants and in some cases
23 counsel to brief everybody on a particular issue.

24 Q. Okay.

1 MR. NIDEL: And just for the record --
2 (Cell phone interruption.)

3 MR. NIDEL: Are you all right?

4 MR. SCHICK: Yeah.

5 Q. (By Mr. Nidel) Exhibit 114 is a February
6 10th, 2015 Carteret townsite strategy meeting
7 PowerPoint. Right?

8 A. Yes, that's what it is.

9 Q. All right.

10 MR. NIDEL: Why don't we take a break?

11 THE VIDEOGRAPHER: We are off the
12 record. It is 4:10 and it's the end of Tape 11.

13 (Break.)

14 THE VIDEOGRAPHER: Okay. We are back on
15 the record. It is 4:22, beginning of Tape 12.

16 (Exhibit No. 115 marked.)

17 Q. (By Mr. Nidel) Hand you Exhibit 115.
18 Exhibit 115 is a June 14 -- or sorry, June 19, 2014
19 response to Vajira, Bates labeled 173778. Is that
20 fair?

21 A. Yes.

22 Q. Okay. Is this a letter that you sent?

23 A. It's not signed by -- it's not signed, but
24 yeah, it's -- I believe it was sent.

1 Q. Okay. This is something you drafted?

2 A. It was something that I participated in the
3 drafting of.

4 Q. Okay. Who else would have participated in
5 the drafting of this Exhibit 115?

6 A. During -- during this time period it would
7 have been Arcadis and possibly counsel.

8 Q. Okay. Who at Arcadis?

9 A. It's generally Lisa, Lisa Szegedi.

10 Q. Okay. And you say you were responding to
11 Vajira. Vajira was the consultant for -- the
12 environmental consultant for the Borough. Correct?

13 A. That's correct.

14 Q. And your response to Vajira's comments are in
15 the italics. Is that correct?

16 A. Yes.

17 Q. And your comments on Page 3 -- 781, Comment
18 2, the last sentence of your response there to Comment
19 2 is, Instead, USMR concluded that actual soil
20 concentrations would be the better indicator of the
21 appropriate AOC boundary. Is that right?

22 A. Yes.

23 Q. And that's something that you've repeated
24 here today. Correct?

1 A. Yes.

2 Q. And you repeat that again in the last bullet
3 to Comment 3: Actual soil data is a better indicator
4 of the extent of soils concentrations above Cleanup
5 Levels. Do you see that?

6 A. Yes.

7 MR. SCHICK: Objection. Form.

8 A. Yes, I do see that.

9 Q. (By Mr. Nidel) Okay. And is that still your
10 position today?

11 A. Yes, it is.

12 Q. For the -- what does USMR believe, if
13 anything, the people that are outside the AOC right
14 now should be doing to determine whether or not they
15 have property that has been impacted by the smelter?

16 MR. SCHICK: Objection. Form.

17 A. I don't know what people should be doing.

18 Q. (By Mr. Nidel) Okay. What is USMR's
19 position, if any, that -- as to what people in the
20 town of Carteret should be doing to identify their own
21 contamination on their property?

22 MR. SCHICK: Objection. Form.

23 A. I don't -- I don't think we can, you know,
24 speak for or determine what any particular resident

1 should do on their private property.

2 Q. (By Mr. Nidel) Is it USMR's position that
3 these people should have tested their property prior
4 to your testing?

5 A. Are you -- who are you referring to? Are
6 you. . .

7 Q. I'm referring to you being the corporations
8 that you're here representing today and then I'm
9 referring to the residents of Carteret. So is it your
10 position that the residents of Carteret should have
11 been testing their own property prior to your
12 investigation in the neighborhood?

13 A. I don't think that's our position.

14 Q. Okay. Okay. Is there something that they
15 should have done, like obtain the operational records
16 of the (inaudible) somehow to determine -- to make a
17 determination as to whether or not they had been
18 impacted by the activities from the smelter?

19 A. Say that again, please.

20 Q. Yeah. Is it USMR's position or Freeport
21 Minerals' position that they should have -- that the
22 residents of Carteret should have obtained historical
23 operating documents or some other evidence of impacts
24 to inform themselves as to whether or not they had

1 been impacted by the smelters operation prior to your
2 investigation?

3 A. I don't believe that's USMR's position.

4 Q. On 782, Statistical Analysis of the AOC
5 Boundary, Vajira comments that The data from all four
6 depths were combined for each Zone, including the
7 depth that was considered "clean," and he has a
8 concern that that would bias the results. Right?

9 A. (No response.)

10 Q. Is that right?

11 A. That was Vajira's comment.

12 Q. Okay. And we saw that in some of the data,
13 that the next clean layer was included in the
14 calculation of the upper confidence limit. Right?

15 A. Let me see. Repeat that question, please.

16 Q. Yeah. I think we saw in some of the sample
17 results, reports that when the UCLs were calculated
18 they included that next clean sample and obviously if
19 it's a clean sample it's going to be below the cleanup
20 standard. Right? So we saw the mathematics of what
21 his concern was, that is, you're including by
22 definition results that are below the cleanup standard
23 in your calculation as identified in some of the
24 exhibits that we looked at today. Right?

1 A. I -- I believe that Vajira's comments here
2 were based on the data analysis that was done as part
3 of the ISDA. I think what you're referring to is the
4 evaluation used on remediation for the properties
5 within the AOC. So it's really two -- two separate
6 parts of the project done at two separate times.

7 So. . .

8 Q. I appreciate that. I think I understand what
9 you're saying. What you're -- for the ISDA, the
10 sampling was done at all four depths and then those --
11 all of those numbers were used, which is different
12 than what was done for the AOC. Correct?

13 A. That's correct.

14 Q. Okay. There is a similar but different thing
15 going on. Is that fair, just to justify my confusion?

16 A. Okay. Similar but different.

17 Q. Similar but different. Right?

18 A. I'll accept that.

19 Q. All right. Thank you. Appreciate it.

20 (Exhibit No. 116 marked.)

21 MR. NIDEL: I only have one, Bob.

22 MR. SCHICK: Yeah, that's all right.

23 Q. (By Mr. Nidel) I'm going to hand you --
24 sorry, I'm going to let Bob look at it.

1 MR. SCHICK: Oh, so the staple didn't go
2 through?

3 MR. NIDEL: Yeah, it's. . .

4 MR. SCHICK: Okay. That's all right.
5 Okay.

6 Q. (By Mr. Nidel) Sorry. I just tried to throw
7 you a paperclip that might help preserve that. It's
8 got stuck on the wire. I'm going to do it again.

9 A. Oh, I see it now. I'll give you one back.

10 Q. All right. Exhibit 116 is a remedial action
11 work plan offsite area of concern September 2016,
12 Bates labeled 169866. Is that fair?

13 A. Yes.

14 Q. If you turn to Page 6?

15 A. Yes.

16 Q. There's a table of the residential direct
17 contact SRSs. Right?

18 A. Yes.

19 Q. Okay. And those are listed as 19 milligrams
20 per kilograms for arsenic and 400 milligrams per
21 kilograms for lead. Correct?

22 A. Yes.

23 Q. And there's no mention of upper confidence
24 limit or any kind of an average. Right?

1 A. No. Those are the -- those are the direct
2 contact standards from the referenced DEP publication.

3 Q. And then if you go to Page 35?

4 A. (Complying.)

5 Q. We might have talked about this yesterday.
6 In the middle of the page there's a paragraph --

7 MR. SCHICK: Hold on. Hold on.

8 Q. (By Mr. Nidel) Oh, sorry. Yeah. Sorry. I
9 do have clips.

10 A. It was kind of stapled on both ends. I'm
11 just trying to avoid --

12 Q. Yeah, that was my --

13 A. -- poking myself with it.

14 Q. You know what, I'm going to give you a clip
15 if you need it.

16 A. No, I'll just use the paperclip.

17 Q. Will it work or do you need a --

18 A. It'll work.

19 Q. You know what?

20 THE COURT REPORTER: I think we should
21 use a clip.

22 MR. NIDEL: I figured that someone more
23 experienced than I would want a clip.

24 Q. (By Mr. Nidel) All right. In the middle of

1 that page, As an additional evaluation to be more
2 protective of the public against direct contact
3 issues -- do you see that?

4 A. Yes.

5 Q. -- 95 percent -- the 95 percent UCLM will be
6 calculated for the zero to 6-inch interval to
7 determine if that interval exceeds the SRS for a
8 specific target analyte.

9 A. Yes.

10 Q. If the zero to 6 interval 95 percent UCLM
11 exceeds the SRS for any target analyte, any locations
12 in the zero to 6 interval that exceed the SRS will be
13 excavated regardless of the 95 percent UCLM calculated
14 for the zero to 2 feet interval as described above.

15 Right?

16 A. That's what it says.

17 Q. Is that what was done to protect from direct
18 contact?

19 A. I believe that's what was indicated would be
20 performed by that -- by that paragraph.

21 Q. Is that what actually happened, do you know?

22 A. I believe that's the case.

23 Q. Okay. We talked about the quality control
24 issue and I believe it was your testimony yesterday

1 that there ended up not being an issue?

2 A. Yeah, early -- early on we identified what we
3 suspected might be a quality control issue based on
4 the relative difference between a sample and a
5 duplicate sample. We worked with the lab to do
6 additional quality control and data validity checks
7 and it appears that the lab was performing consistent
8 with both our data quality objectives and the lab's
9 own internal QA/QC --

10 Q. Okay. And --

11 A. -- procedures.

12 Q. Okay. And I appreciate that.

13 (Exhibit No. 117 marked.)

14 Q. This exhibit might help us discuss the issue.

15 A. Okay.

16 Q. So I --

17 MR. SCHICK: Hold on.

18 Q. (By Mr. Nidel) I want to let Bob write the
19 information down.

20 MR. SCHICK: Okay. You can have it.

21 I'm sorry.

22 Q. (By Mr. Nidel) I've given you an Exhibit
23 117.

24 A. Yes.

1 Q. 117 is an Arcadis soil project status update
2 December 28th, 2015. Is that right?

3 A. Yes.

4 Q. And if you turn to Page 13 --

5 MR. NIDEL: Are you all right?

6 MR. SCHICK: Yeah. Thanks.

7 A. Okay.

8 Q. (By Mr. Nidel) There's a slide on laboratory
9 quality control.

10 A. Page 13?

11 Q. Yeah, the page -- the page that's numbered 13
12 versus the Bates number. I don't know. Am I -- am
13 I -- are we not on the same document?

14 A. (Indicating.)

15 Q. Oh, well, maybe --

16 MR. SCHICK: Yeah, actually the date --
17 would you say the date again of yours?

18 MR. NIDEL: Yeah. Did we not have the
19 same thing? That's going to be a problem.

20 A. February 17th, 2016.

21 Q. (By Mr. Nidel) Okay. Well, we're going to
22 -- I'm not sure what we're going to do, but --

23 MR. NIDEL: Is that what you have as
24 well?

1 MR. SCHICK: I wrote it down.

2 MR. NIDEL: Oh, you don't have one.

3 MR. SCHICK: I don't have it.

4 MR. NIDEL: You don't have it.

5 MR. SCHICK: But I wrote it down as
6 2/27/16.

7 Q. (By Mr. Nidel) All right. I'm assuming I
8 don't have another copy. Well, I can show you this.

9 A. Okay.

10 Q. The quality control?

11 A. I was -- is it still --

12 Q. I don't know if we need to make an exhibit.

13 A. Okay.

14 Q. I want to -- you can put that to the side.

15 A. All right. (Complying.)

16 Q. I just want to understand. There's a slide
17 from another presentation and I guess for the record
18 at least to know what you're looking at, if you can
19 give us the date of that --

20 A. Of this one?

21 Q. The Bates number, I want --

22 MR. SCHICK: Yeah, just give the Bates
23 number at the bottom right.

24 A. This is Bates USMR 00096865.

1 Q. (By Mr. Nidel) Okay. And on there there's a
2 discussion of that QC issue. Right?

3 A. There is.

4 Q. Okay. And there were some significant
5 disagreement between samples and their duplicates as
6 you I think mentioned. Right?

7 A. Right.

8 Q. Okay. Those samples -- and there was a
9 suspicion I think on the part of USMR or on the part
10 of your cleanup team, remedial team, that there may be
11 a problem with the lab. Right?

12 A. Well, just on the face of it when, you know,
13 looking at, you know, a few selected original and
14 duplicate samples there appeared to be a fairly large
15 relative percent difference between the -- between the
16 two samples. So that was -- that was an issue that we
17 flagged or Arcadis flagged with the lab.

18 Q. Okay. And that was because a sample was
19 taken and an attempt to duplicate that sample was
20 taken and those two samples were sent to the lab and
21 came back with different numbers. Is that fair?

22 A. Correct.

23 Q. Okay. Those samples were not split samples.
24 Right? Was there a sample taken, composited -- or

1 taken, shaken up and then split into two samples and
2 then shipped off, or was it two samples taken from an
3 approximate or an effort at the sample area?

4 A. I believe it was the former, that, you know,
5 a 6-inch --

6 Q. Core?

7 A. -- section, core, if you will, was taken and
8 then through our -- the normal procedure was
9 homogenized together and two samples were taken I
10 believe from the same physical sample.

11 Q. Okay. So is it your understanding ultimately
12 that the lab results were correct but that there was
13 some heterogeneity in those samples?

14 A. It was -- it was possible that there was some
15 heterogeneity because, I mean, if you just -- I don't
16 know if you -- you don't have this in front of you
17 now, but just the -- just the first sample which
18 was -- looks like it was taken from PPIN 1001, which
19 is the northernmost park -- parcel, the original lead
20 reading was 211 and the dup came -- or duplicate came
21 up as 1,580. So obviously there was something in the
22 duplicate sample that it was probably, you know,
23 disseminated piece of lead paint or something that
24 would cause the lead to be that much larger than what

1 was in the original sample.

2 Q. Okay. So as far as the database goes when I
3 look at data, was -- was one of those two sample
4 results rejected over the other?

5 A. I don't recall for this particular -- for
6 these particular samples which ones were rejected and
7 which ones weren't.

8 Q. Let me ask this generally: Where you had a
9 sample and a duplicate, was there a method or an
10 approach to accepting or rejecting one over the other
11 or were they generally both included in the analysis
12 or was the outlier analysis applied or --

13 A. I don't know how they were umpired.

14 Q. Okay. Were the -- were the data issues --
15 and I don't have it in front of me and maybe you can
16 help me out -- were they primarily limited to lead?

17 A. No. I believe that there were arsenic issues
18 -- I mean, based on just this table here which shows,
19 you know, four samples, the originals and duplicates,
20 there's 152 percent relative percent deviation for one
21 of the lead examples. There's a 171 for one of the
22 copper examples and 120 for one of the arsenic
23 samples. So it wasn't something that was isolated
24 apparently to a specific analyte.

1 MR. SCHICK: Let's figure out what we're
2 going to -- what we're going to attach here.

3 MR. NIDEL: Okay.

4 MR. SCHICK: If you've got an extra
5 label, why don't we just attach this whole thing as
6 117 instead of what you did, unless you need it.

7 MR. NIDEL: I don't -- I need to look at
8 it because I don't know what --

9 MR. SCHICK: Yeah. Okay. Sure.

10 MR. NIDEL: -- what notes is there.
11 Okay.

12 MR. SCHICK: I'm going to do this just
13 to make sure you know.

14 MR. NIDEL: Okay. I appreciate it.

15 (Exhibit No. 117 re-marked.)

16 Q. (By Mr. Nidel) I'm going to hand you what's
17 been marked as 117. It will replace the previously
18 marked Exhibit 117.

19 A. Okay.

20 Q. It is a USMR project status update dated
21 December 8th, 2015 with a Bates label --

22 A. Is that the one we just looked at with the
23 table in there?

24 Q. It contains the page Bates labeled that we

1 discussed on --

2 A. Okay.

3 Q. -- quality control sampling.

4 MR. SCHICK: Thank you.

5 MR. NIDEL: Thank you.

6 (Exhibit No. 118 marked.)

7 Q. (By Mr. Nidel) What is Exhibit 118?

8 A. Exhibit 118 is a document PowerPoint
9 presentation prepared by Geosyntec to look at the AOC
10 data, the AOC soil data, and to use that data to
11 estimate the potential extent of smelter impacts and
12 to try to tease out, if you will, some of the other
13 potential sources of lead, arsenic and copper in the
14 AOC samples. And I mean, the ultimate goal on this
15 was then to determine the -- or provide a
16 recommendation on the lateral extent of the transects.

17 Q. Okay. And if you turn to Page -- well, I'll
18 give you a Bates number of 887.

19 A. 887. Okay.

20 Q. Their data evaluation approach, second bullet
21 is, Select approximate background levels. What is the
22 background for arsenic and lead and copper in
23 Carteret?

24 A. I am not sure what Geosyntec used for -- for

1 the background number on this.

2 Q. Okay. What does USMR use for the background
3 of those metals?

4 A. I don't think we routinely use a background
5 concentration.

6 Q. Okay. What did Geosyntec ultimately end up
7 determining was an appropriate background for the
8 area?

9 A. I'm not sure. I'm trying to find it in the
10 presentation, if they -- if they use that or not.

11 Q. What do -- what do you use as the background
12 for arsenic, lead or copper?

13 A. I think I just said that we don't, you
14 know -- we don't use a background number.

15 Q. So you don't find it helpful to understand
16 what the background is in assessing whether there are
17 impacts whether from the smelter or from other
18 industrial or household sources?

19 A. Well, that will -- that will ultimately be
20 part of the analysis that's accompanying the transect
21 study, but, you know, for -- for purposes of the work
22 that is being done within the AOC on sampling and
23 remediation, we're not focusing on background. We're
24 focusing on total concentrations for purposes of

1 determining cleanup or not.

2 Q. Okay. But you -- I know you're still doing
3 cleanup and you're still doing remediation, but you're
4 also engaged with companies like Geosyntec to evaluate
5 the boundary by evaluating what contribution, if any,
6 USMR had to the offsite contamination beyond the AOC.
7 Right?

8 A. That's part of what Geosyntec is working on,
9 yes.

10 Q. Okay. And you're working with them. Right?

11 A. Yes.

12 Q. And you're managing Geosyntec's efforts in
13 that regard. Right?

14 A. Yes.

15 Q. Okay. The -- if you go to Page 892.

16 A. 892.

17 Q. There's a graph of lead versus copper.

18 A. Yes.

19 Q. And there's some high copper samples that
20 have relatively low lead. Right?

21 A. Yes.

22 Q. So we got about 15,000 and one that's
23 actually above 20,000 and then some between 10 and
24 15,000. Right?

1 A. Yeah, it looks like there's about half a
2 dozen that fall into that range.

3 Q. Okay. And what is your understanding of
4 where that copper came from?

5 MR. SCHICK: Objection. Form.

6 A. I don't think we've determined exactly where
7 that copper came from.

8 Q. (By Mr. Nidel) Okay. Would levels of copper
9 that high come from the use of copper-containing
10 pesticides from the 1800s?

11 MR. SCHICK: Objection. Form. Calls
12 for expert testimony.

13 A. I don't know.

14 Q. (By Mr. Nidel) Is it USMR's position that
15 copper-containing pesticides used in the 1800s would
16 cause copper levels above 5,000 parts per million?

17 MR. SCHICK: Same objection.

18 A. I don't know.

19 Q. (By Mr. Nidel) Why -- go to the next page.
20 Why did Geosyntec use a log scale?

21 A. Probably because it better represented the
22 relationship between the two analytes, that they
23 weren't linearly related, they were logarithmically
24 related.

1 Q. Well, plotting it on a log scale doesn't
2 change the relationship. The relationship is the
3 relationship. Right? But plotting it on a log scale
4 certainly compresses the data and makes it look like
5 it kind of fits a line. Is that right?

6 MR. SCHICK: Objection. Form.

7 A. Again, I'm not -- I'm not a statistician and
8 I don't know why Geosyntec chose to use a log scale.

9 Q. (By Mr. Nidel) What arsenic-based herbicides
10 were used in Carteret neighborhood?

11 MR. SCHICK: Objection. Form.

12 A. I don't know what may have been used at any
13 particular Carteret neighborhood.

14 Q. (By Mr. Nidel) We looked at -- can I see
15 those exhibits?

16 A. Which -- which ones?

17 Q. Just the stack.

18 A. Oh, all of them? (Complying.) Got it?

19 Q. I will get it.

20 Earlier we talked about the developmental
21 history of -- the site and development of the ISDA and
22 we talked about that northwest corner and we talked
23 about -- sorry, northeast corner.

24 A. Northeast corner.

1 Q. And we talked about the park. Right? And
2 whether you were aware at the time what the
3 development history of those areas was. Right?

4 A. I believe that's true.

5 Q. ISDA samples, there were some ISDA samples
6 that were actually moved because of your understanding
7 of previous development or use of fill in the areas
8 where you had originally planned to take those
9 samples. Right?

10 A. I believe some sample locations were moved
11 for reasons that it was difficult maybe to obtain the
12 samples. We hit refusal and we had to move the
13 locations slightly.

14 Q. You had refusal from the property owner?

15 A. No. I'm saying refusal in the sense of --

16 Q. Couldn't get down?

17 A. -- when you -- when you're drilling down you
18 hit something that allows you to not go further.

19 Q. Okay. Well, I had read something -- it
20 appeared to me that there was -- there were samples
21 that were moved and I think there was a number of
22 samples that were moved in that ISDA phase because of
23 concerns about the developmental history of the sample
24 site. You don't recall that?

1 A. I don't recall that.

2 Q. Is it still your testimony that you did not
3 assess the development history such as through those
4 aerial photos that we looked at of areas like the park
5 in the northeast corner until after you had done the
6 sampling for the ISDA?

7 A. That's my recollection.

8 Q. I'm going to hand you back Exhibit 110 and
9 just to be clear, the ISDA was the 60 Series sampling.
10 Right?

11 A. Yes.

12 Q. Okay.

13 A. Well, there was a 60 Series and I believe a
14 200 Series which were the ones that were more proximal
15 to the original facility boundary.

16 Q. Okay. If you look at that slide that I had
17 open, if you can tell what the Bates number is?

18 A. 836124.

19 Q. Okay. And the -- I think it's the bottom two
20 bullet points. Can you read those bullet points?

21 A. Three samples were relocated to avoid
22 historical fill areas identified by the Borough, and
23 Others were relocated to avoid what appeared to have
24 been redeveloped areas.

1 Q. Okay. So there was some appearance of
2 redeveloped areas and some investigation as to the
3 historical development prior to those samples being
4 bored and analyzed. Right?

5 A. Yeah, apparently based on this, that's true.

6 Q. Okay. Do you know why you didn't also
7 relocate the samples that we talked about in the
8 northeast corner or the park?

9 A. No, I don't.

10 Q. Okay. You can put that one back in the
11 stack.

12 A. (Complying.)

13 Q. My -- I don't know what it was, but I --

14 A. Can I take them all back?

15 Q. You can take them all back, sure.

16 A. Keep them together.

17 Q. If you go to Page 917 of the Exhibit 118?

18 A. What was that page again?

19 Q. It is 917.

20 A. 917.

21 Q. There's a data processing to evaluate the
22 potential maximum extent. Right? And the first
23 bullet is the screen out lead paint samples from data
24 using the lead/copper ratio. Right?

1 A. Yes.

2 Q. So what -- again, what's the magic ratio that
3 lead should be to copper that would either rule in or
4 rule out a lead result?

5 A. I don't know if there was a specific number,
6 but I think if you refer back to Bates 173892 on the
7 lead -- on the graph of lead versus copper, it's
8 probably those one, two, three, four -- yeah, half a
9 dozen or so samples which have very high lead numbers
10 but virtually no copper. I mean, those would be the
11 ones that I would assume were screened out.

12 Q. Okay. And then it looks like you're going to
13 determine the decline curves for 2012 air dispersion
14 models Scenarios 1 and 2, and then estimate the extent
15 of AOC based on fitting Scenarios 1 and 2 decline
16 curves to the upper confidence limit data. Right?

17 A. Yes, that's what it says.

18 Q. Okay. So you are using that model -- I guess
19 this is what we discussed. You're using that decline
20 curve to estimate based on these scenarios how far
21 offsite these contaminants would likely have gone.
22 Right?

23 A. Yes, I think I -- I think I testified to that
24 earlier, that, you know, we utilized both the McVehil

1 decline curve along with the metals ratio data, used
2 those two in tandem to project outwards and inform us
3 on what the lateral extent of the transects should be.

4 Q. Okay. If you turn to Page 918?

5 A. Yes.

6 Q. Scenario 2 with a 225-foot stack actually
7 indicates that the lateral extent would be somewhere
8 around it looks to me like about 1,750 or 1,800
9 meters. Is that right?

10 A. Thereabouts.

11 Q. Okay. But you used, what was it, 1,600?

12 A. Well, I mean, as I said, we used the
13 dispersion model decay curves in tandem with the
14 metals ratios. So you can't -- you can't take the
15 drawings on 173918 in a vacuum. You -- what's more
16 illustrative is the following page, which shows how
17 the combination of the two was utilized.

18 Q. The modeling that was done in Scenario 2,
19 there's no 400-foot stack there. Right?

20 A. No. I believe we've gone through that
21 earlier and the two models were based on the 110 and
22 the 200-foot stacks.

23 Q. Okay. And if you had a -- based on what we
24 have here from the 100-foot stack and the 200-foot

1 stack, a 400-foot stack would have gone further out.

2 Right?

3 A. All things -- all other parameters being
4 equal, that's accurate.

5 Q. And in parlance of your conceptual site model
6 there would have been a less rapid decrease in
7 concentrations as you moved away from the site.

8 Right, that would be a gentler slope?

9 MR. SCHICK: Objection. Form.

10 A. Again, all other parameters being equal,
11 that's -- that's correct, I believe.

12 Q. (By Mr. Nidel) Okay.

13 A. But again, I'm not an air -- I'm not an air
14 modeler.

15 Q. Right. So if you look at the next slide from
16 those curves, which I think is what you were referring
17 to, what data is this? Is this the data from the AOC?
18 Is this the data from. . .

19 A. This is -- this is AOC data and the numbers,
20 I believe, are 95 percent UCL copper per -- on a use
21 area basis.

22 Q. Okay. So these aren't actual sample points;
23 these are 95 percent confidence numbers --

24 A. That's correct.

1 Q. -- averaged over a use area. Right?

2 A. That's correct.

3 Q. Okay. Have you done this without taking the
4 average numbers so you plot out what you get distance
5 from the site without averaging?

6 A. I don't think we've -- we've done it on
7 anything besides the 95 percent UCL.

8 Q. If you go to the Page 922?

9 A. 922.

10 Q. It says, Most conservative estimate of
11 potential step-out - 1,600 meters outer edge -
12 extremely conservative based on data to date and air
13 model. Do you see that?

14 A. I do.

15 Q. Okay. So that's the McVehil model Scenario
16 2, 1,600 meters. Right?

17 A. Well, it's -- it's the McVehil model coupled
18 with the lead and copper 95 percent UCLs.

19 Q. Okay.

20 A. That are in, you know, these two other
21 graphs.

22 Q. Okay. Wouldn't it have been more
23 conservative to get some input from a 400-foot stack?

24 A. (No response.)

1 Q. Like the stack that was onsite?

2 MR. SCHICK: Objection. Form.

3 A. I don't -- I don't know.

4 Q. (By Mr. Nidel) Well, it would have told you
5 your decline curve was more gradual and unless the
6 pollutants went out further. Right?

7 MR. SCHICK: Objection. Form.

8 A. The impacts may have gone out further, but
9 from a 400-foot stack they would have been at a much
10 lower concentration if you're -- if you're emitting
11 the same amount of material.

12 Q. (By Mr. Nidel) Okay. And you don't know how
13 much material was emitted. Right?

14 A. Not off the top of my head, no.

15 Q. Do you know it anywhere?

16 A. I don't know.

17 Q. Okay. If you go to the next page it says,
18 Confirm metal ratios show pattern consistent with USMR
19 smelter emissions. We talked a lot about these ratios
20 and smelter emissions, but what does Geosyntec know
21 about the ratio of smelter emissions that you don't
22 know about the ratio of smelter emissions?

23 A. I'm not sure I understand that question.

24 Q. Well, we talked a lot about ratios and you

1 don't know the ratio of smelter emissions. Right?

2 A. Off the top of my head, I do not know.

3 Q. You don't know it at all. Right?

4 A. Well, there's -- I mean, we've looked at, you
5 know, other information today that, you know, shows
6 various concentrations of different materials used at
7 the smelter over time.

8 Q. Okay. So what information about smelter
9 ratios did you know prior to our two days of
10 discussion?

11 A. Just what I've reviewed from historic
12 reports, primarily what Dr. Dunk did back in the '80s.

13 Q. And did you review that with Geosyntec prior
14 to our discussion?

15 A. I did not.

16 Q. Did anyone?

17 A. Not that I'm aware of.

18 Q. Okay. What does Geosyntec know about the
19 ratio of smelter emissions, metals in smelter
20 emissions?

21 A. I don't know what they know.

22 Q. Well, what information have you provided
23 them?

24 A. I don't know what's been provided to them.

1 Q. You don't know what's been provided to them?
2 You're the project manager.

3 A. Yes, but I don't know what's -- what's been
4 provided to them.

5 Q. Who provides them information other than you?

6 A. They may have been provided information from
7 Arcadis. They may have been provided with information
8 from counsel. There's other people involved in this
9 project that provide information besides myself.

10 Q. Okay. Well, you're here as a 30(b)(6)
11 witness talking about the remediation. Geosyntec is
12 your consultant. They're the one guiding you on
13 whether you need to continue these transects, whether
14 you need to clean up those transects, whether you need
15 to create other transects, but yet you don't know --
16 and their analysis is based on the ratio of metals you
17 found in the soil compared to some estimate of metals
18 that were emitted from the smelter. Right?

19 A. That's their proposed plan.

20 Q. Okay. But you don't know what they know
21 about the ratio of metals from the smelter. Right?

22 A. I don't know what exactly that they've been
23 provided with.

24 Q. And prior to me giving you documents, you

1 couldn't tell me anything about the ratio of metals in
2 the smelter emissions. Right?

3 A. I've looked at a, you know, large number of
4 documents and I'm unable to tell you off the top of my
5 head what certain ratios of metals in the smelter were
6 without looking back on historic information.

7 Q. Okay. You know, when we first started
8 discussions on ratios I said what was the ratio of
9 emissions metals from the smelter, you didn't have an
10 answer. Right?

11 MR. SCHICK: Objection. Form.

12 A. I didn't have an answer off the top of my
13 head.

14 Q. (By Mr. Nidel) Okay. What document do you
15 need to tell you what the ratio was?

16 A. I'd have to look through the historic reports
17 to -- that primarily were prepared by Dr. Dunk while
18 the smelter was in operation to get that information.

19 Q. Did you provide that to Geosyntec? You did
20 not. Right?

21 A. I'm not aware that was provided to Geosyntec.

22 (Exhibit No. 119 marked.)

23 Q. Okay. Hand you Exhibit 119. It's a soil
24 project data evaluation presentation, September 28th,

1 2016, Bates labeled 114477. Is that right? Oh,
2 sorry, you don't have it. Fair enough, in fairness to
3 both of you.

4 Okay. Is that September 28th presentation
5 Bates labeled 114477?

6 A. Yes.

7 Q. Okay. And it looks like it's got some
8 comments. This must have been a draft. Do you see on
9 Page 3 of the presentation there's a comment BJ?

10 A. Page?

11 Q. The third page. It's 479.

12 A. Oh, yes.

13 Q. There's a comment there on select approximate
14 background levels?

15 A. Yes.

16 Q. Okay. And then if you turn two pages there
17 you see Speaker Notes for Slide 3, it says, Background
18 selected at 2X actual background copper levels to
19 allow more precise definition of smelter emissions
20 ratio signature. Do you see that?

21 A. I see that.

22 Q. Okay. What is the background that was
23 selected?

24 A. I don't know.

1 Q. Okay. Did you receive a copy of this
2 presentation from Geosyntec prior to it being
3 finalized?

4 A. I believe I did.

5 Q. Okay. And you along with others who provided
6 comments. Right?

7 A. Yes, it appears there's comments.

8 Q. All right. If you'd turn to Page 483?

9 A. 483, yes.

10 Q. There's a comment, If we are not 100 percent
11 sure about the smelter signature, suggest deleting
12 "clear" and putting in more qualifiers around this
13 statement. Do you see that?

14 A. I do.

15 Q. Okay. And that's an NJ1 comment. I believe
16 it relates back to the previous slide.

17 A. Yes.

18 Q. There is no "clear" on there. I'm assuming
19 that Geosyntec is not 100 percent sure about the
20 smelter signature. Do you know if they were 100
21 percent sure about that?

22 MR. SCHICK: Objection. Form.

23 A. Yeah, I'm not sure what the clear reference
24 is because, as you said, the word clear doesn't appear

1 on the page.

2 Q. (By Mr. Nidel) Okay. Well, I don't -- I
3 don't know if PowerPoint -- that's the problem I have.
4 I don't know if PowerPoint previews with redlines or
5 previews accepting the redlines. I don't have a
6 PowerPoint version of this, so I would ask for a
7 native version of this document because I would assume
8 that people reviewed this in PowerPoint, commented in
9 PowerPoint, and what we're seeing is a PDF of what I
10 got. Is that fair, that you reviewed these slides in
11 PowerPoint and commented natively in PowerPoint?

12 A. I believe, based on how these comments are
13 appearing, that it was something that was reviewed in
14 PowerPoint.

15 Q. So I would ask for natives of particularly
16 PowerPoints with comments, but I don't know that I --
17 the -- why was -- do you pay Mike McNally?

18 A. Do we pay?

19 Q. Do you pay him to be your --

20 A. Yes, the LSRP program in New Jersey indicates
21 that the entity that the LSRP is working for
22 reimburses the LSRP for the services.

23 Q. What's his hourly rate?

24 A. I don't know off the top of my head.

1 (Exhibit No. 120 marked.)

2 Q. I'll hand you Exhibit 120. Good catch.

3 Exhibit 120 is an e-mail from you to you with comments
4 on redline dated 11/13/2014. Is that correct?

5 A. That's what it looks like.

6 Q. All right. And on the first page of what I
7 assume to be the attachment there's some discussion of
8 dioxins and furans right in the middle of the page.

9 A. I see that.

10 Q. Okay. In the last sentence it says, Mike
11 McNally concerned that someone might show our
12 conceptual model potentially wrong. Right?

13 A. Okay.

14 Q. Okay. He's talking about the conceptual
15 model for dioxins?

16 A. I think he's talking about the conceptual
17 model in general, but. . .

18 Q. Okay. What was his concern that someone
19 might show that it was wrong?

20 MR. SCHICK: Objection. Form.

21 A. I don't know what his specific concern was.

22 Q. (By Mr. Nidel) Is it -- is it his conceptual
23 model or USMR's conceptual model for the whole gang?

24 MR. SCHICK: Objection. Form.

1 Q. (By Mr. Nidel) Our conceptual model?

2 A. I'm not sure who you're considering the whole
3 gang, but it's USMR's conceptual model.

4 Q. Okay. So why was his comment -- was it his
5 comment that there was concern that our conceptual
6 model would be proven wrong or was it you who wrote
7 that?

8 A. You who -- who you that wrote that?

9 Q. Again, this is a problem because I don't have
10 native Word documents, so I can't see how it shows you
11 on Word who made a comment.

12 A. Yeah.

13 Q. I don't know if that's Mike McNally saying --

14 A. It's -- yeah.

15 Q. -- you know, referring to himself in third
16 person saying he's concerned --

17 A. No.

18 Q. -- or if it's you taking notes on either a
19 conversation or something else. I don't know.

20 A. Let me -- let me try to clarify this.

21 It's -- I believe that the nonunderlined text is
22 prepared by Mr. McNally. The underline is comments
23 that I had as part of the discussion.

24 Q. Okay. That's certainly helpful. If you go

1 to 487?

2 A. (Complying.)

3 Q. There's under PAHs there's a comment that you
4 put in there: Mike McNally less concerned about PAH's
5 than he is about dioxins/furans. Do you see that?

6 A. I do.

7 Q. I think it was yesterday I asked you, you
8 know, if Mike McNally was concerned about dioxins and
9 I'm not sure I got an answer. But you would agree
10 that Mike McNally had some concern about your ability
11 to delineate and avoid cleanup for dioxins. Correct?

12 MR. SCHICK: Objection.

13 A. No, I don't think that represents what I
14 testified to yesterday. I believe I said that in
15 his -- Mr. McNally's evaluation of the onsite
16 delineation data he felt that delineation of dioxins
17 was -- may not have been complete and as a result it
18 was at Mr. McNally's request that we did the
19 additional dioxin delineation sampling.

20 (Exhibit No. 121 marked.)

21 Q. (By Mr. Nidel) I hand you Exhibit 121.
22 Exhibit 121 is an e-mail from William Cobb to you
23 dated 11/19/2015. Is that right?

24 A. Yes.

1 Q. Project update?

2 A. Yes.

3 Q. And it's got an e-mail from you to him below
4 that. Right?

5 A. Yes.

6 Q. And you told him with respect to dioxins and
7 furans, Our most recent testing indicates we still
8 haven't achieved delineation at one of the points
9 along the northern site boundary. Do you see that?

10 A. I do.

11 Q. Did you delineate -- what other portions of
12 the boundary of the site did you achieve delineation
13 at for dioxins and furans?

14 A. It was -- it was the opinion of Mr. McNally
15 that the area that we had not yet achieved delineation
16 was, you know, what I described here as the northern
17 site boundary. During the evaluation of the data
18 Mr. McNally felt that delineation had been achieved in
19 other locations so that was the area that we were
20 focusing on.

21 Q. And then on the next page there is a
22 discussion of the boundary, AOC boundary?

23 A. Uh-huh.

24 Q. It says, Based on the fact that the lab QA/QC

1 assessment hasn't identified a systemic problem with
2 analyses, we're going to be faced with expanding the
3 AOC boundary. We have Mike Ruby from Integral engaged
4 and he'll be digging into the Carteret data just as
5 soon as he's done working through the Douglas project
6 he's working on. It will be a very delicate
7 discussion with the LSRP and (especially) the Borough.
8 How long were you working with Mike Ruby from
9 Integral?

10 A. Unfortunately Mr. Ruby worked on this for an
11 extremely brief period of time before he committed
12 suicide.

13 Q. Well, all reverence for Mr. Ruby aside, the
14 only -- I think there's only one, maybe two documents
15 I've seen from Integral so I don't know what other
16 documents from Integral or e-mails to Integral you
17 have. Was there anyone else from Integral that you
18 worked with other than Mike Ruby?

19 A. Just the individual that was mentioned on the
20 Integral document that you showed me around lunchtime
21 today.

22 Q. Okay. I would ask to verify that we have all
23 the Integral documents because it seems that there
24 would have been e-mails and other --

1 A. Okay.

2 Q. -- invoices or memos, anything else relating
3 to Integral.

4 (Exhibit No. 122 marked.)

5 Q. I hand you Exhibit 122. Exhibit 122, can you
6 identify what that is?

7 A. It's -- it looks like a chronology of
8 Carteret dioxin and furan history.

9 Q. Is that something you prepared?

10 A. I believe that I did prepare this quite a
11 while ago, probably in the 2014, 2015 time frame, to
12 understand what had been done with respect to dioxins
13 during that -- during that time I guess up to 1989.

14 Q. Okay. And is it your handwriting, as well?

15 A. I believe that is my handwriting.

16 Q. Okay. If you turn to the second page?

17 A. Yes.

18 Q. There's an entry for 1987, the Tier 4 EPA
19 study. Right, and then some bullets?

20 A. Yes.

21 Q. Okay. And there's a discussion of the
22 baghouse dust homologues contain generally more
23 chlorines than stack emissions. Do you see that?

24 A. Yes, I see where it says that.

1 Q. Okay. And I had asked you if you were aware
2 that the baghouse dust contained dioxins and you had
3 said you weren't aware of that, but you actually
4 provided detailed history of dioxins which include the
5 mention of the dust sampling that actually showed more
6 highly chlorinated dioxins than the stack emissions.
7 Right?

8 MR. SCHICK: Objection. Form.

9 A. I -- I may have copied some language from
10 that EPA Tier 4 dioxin study.

11 Q. (By Mr. Nidel) Okay. But you know that the
12 conclusion that Arcadis came to in their assessment of
13 dioxins with the help of you and others was that the
14 dioxins you found offsite were not chlorinated enough
15 to resemble those dioxins that were found in the stack
16 emissions. Correct?

17 A. Can you repeat that?

18 Q. Yeah. There was more octa in higher
19 chlorinated dioxins in the offsite sampling than there
20 was in the stack emissions. Right?

21 MR. SCHICK: Objection. Form.

22 A. There was more octa in the perimeter dioxin
23 samples than there were in the stack samples that they
24 were compared to, yes.

1 Q. (By Mr. Nidel) Okay. And there was more
2 octa in the baghouse dust than there was in the stack
3 samples. Right?

4 A. I don't -- I don't know how the baghouse
5 samples convert to octa or not. I don't know what the
6 speciation of that is.

7 Q. Well, you know that they were more highly
8 chlorinated. Right?

9 MR. SCHICK: Objection. Form.

10 A. That's what it says in his EPA report.

11 Q. (By Mr. Nidel) Okay. You said you prepared
12 this exhibit a long time ago. I think you said 2014?

13 A. Yes.

14 Q. And when was the sampling done on the
15 perimeter of the north warehouse area?

16 A. I believe it was in 2015.

17 Q. Okay. Do you -- did you know that that north
18 warehouse quadrant was the lowest dioxin level found
19 composited across the entire site of any one quadrant?

20 MR. SCHICK: Objection. Asked and
21 answered.

22 A. Yeah, I'm not sure that it was the absolute
23 lowest, but I can't recall exactly from the -- from
24 the figure that I'm recalling, but there -- there were

1 generally lower levels of dioxin in the composite soil
2 samples on the -- on the western side of the property
3 as compared to the eastern and southern side of the
4 property.

5 Q. (By Mr. Nidel) Okay. And so did you know --
6 did you know relatively what that dioxin levels were
7 in that northwest coordinate -- northwest section.

8 A. We knew from the 1988 remedial investigation
9 report what the composite samples for dioxin were in a
10 number of locations around the site. We didn't know
11 specifically any additional dioxin concentration
12 information until we went out and did the sampling
13 analysis in 2015 for purposes of delineation.

14 Q. Okay. But you know that -- you knew that
15 the -- you knew what the results were of the composite
16 sampling including in that northwest corner of the
17 site prior to 2015. Right?

18 A. We did.

19 Q. Okay. And if you turn to Page 3 of your
20 notes, bottom of the page, second-to-last bullet point
21 it says, Highest in East side of Scrap Metal Area,
22 East side of Main Plant, and Lagoons. Lowest in West
23 side of North Warehouse Area. Do you see that?

24 A. Okay. I see that.

1 Q. Okay. So you knew that the dioxins were the
2 lowest onsite of any data you had for site data in
3 that northwest corner but yet you decided that was the
4 place you were going to smoke out dioxins. Right?

5 MR. SCHICK: Objection. Form.

6 A. That was the area that as per the LSRP
7 additional delineation was required, so that is the
8 area where we did that sampling and analysis.

9 Q. (By Mr. Nidel) Okay. But why would you do
10 sampling and analysis to delineate dioxins in an area
11 where you know they're not the most significant
12 problem?

13 MR. SCHICK: Objection. Form.

14 A. In a review -- in a review of the data, the
15 LSRP indicated that that's where the sampling should
16 be performed and that's where the sampling was
17 performed.

18 Q. (By Mr. Nidel) Did the LSRP review the data
19 that we just reviewed?

20 A. I don't know what specific information
21 Mr. McNally may have reviewed, but he had available to
22 him the historic site data.

23 Q. Okay.

24 MR. SCHICK: May we take a break,

1 please?

2 MR. NIDEL: Sure.

3 THE VIDEOGRAPHER: We are off the
4 record. It is 5:25 p.m. This is the end of Tape 12.

5 (Break.)

6 THE VIDEOGRAPHER: Okay. We are back on
7 the record. It is 5:39 and this is the beginning of
8 Tape 13.

9 Q. (By Mr. Nidel) With respect to the -- what
10 do you call the project that you manage? It's late in
11 the game for me to ask you what -- how to refer to it,
12 but I just want to refer to it the way you do.

13 A. I think in, you know, general terms we call
14 it the USMR soil project.

15 Q. Okay. I'm confused by her. It was -- it was
16 called the something soil project. What is it?

17 A. USMR.

18 Q. Okay. I didn't hear you so I was trying to
19 sneak an answer there and I couldn't get it.

20 The USMR soil project. All right. In your
21 individual capacity can you tell me does Freeport
22 Minerals pay the bills for the USMR soil project?

23 MR. SCHICK: Excuse me. Would you
24 restate?

1 Q. (By Mr. Nidel) Does USMR pay -- sorry, does
2 Freeport Minerals pay the bills for the USMR soil
3 project?

4 A. Can you -- can you, you know, help me
5 understand what you mean by pay the bills?

6 Q. Who pays -- who pays for the work in the USMR
7 soil project?

8 A. Ultimately USMR does.

9 Q. Okay. Who is it paid by initially?

10 A. The actual -- I believe it's a wire will go
11 out from Freeport Minerals to whichever vendor,
12 contractor, consultant, whatever is providing the
13 service and then Freeport will then bill essentially
14 the subsidiary, in this case USMR, so it shows off as
15 a -- as a cost on USMR's books.

16 Q. And USMR has no revenue. Right, other than
17 their lease properties on the site there?

18 A. I believe that's what I testified to
19 yesterday.

20 Q. Okay. So how do they pay those bills to
21 Freeport Minerals?

22 MR. SCHICK: Objection. Form. That's
23 not what he said.

24 Q. (By Mr. Nidel) Isn't it deducted from USMR?

1 My understanding of what you said was that Freeport
2 would pay -- Freeport Minerals would pay the invoice.
3 Correct?

4 A. That's my understanding.

5 Q. Okay. And then there's something on the
6 books that they get a credit from USMR. Is that
7 right?

8 A. It goes against the liability that's on
9 USMR's books.

10 Q. Okay. And who is paying that liability?

11 A. I don't know exactly how that -- all that
12 accounting works.

13 Q. Is there any funding and, again, in your
14 individual capacity, any funding that comes from
15 Freeport-McMoRan, Inc.?

16 A. Not to my knowledge, but I don't know.

17 Q. Why -- why did USMR or Freeport wait until 20
18 -- why didn't they sample the neighborhood in 1989?

19 A. In the late '80s we were required pursuant to
20 our agreement with the State of New Jersey to do a
21 remedial investigation of the historic or the at that
22 time recently shut-down operations. The company
23 prepared a remedial investigation work plan which
24 described the extent of the sampling that it was

1 proposing to do. The State of New Jersey at that time
2 reviewed and approved the scope of the remedial
3 investigation and the remedial investigation was in
4 turn performed by the company and reported to the
5 State.

6 Q. Okay. And at the time you didn't do any
7 sampling offsite. Right?

8 A. We did not, nor did the State identify that
9 any offsite sampling was necessary. Had they -- had
10 they identified that I'm sure that would have been
11 part of the remedial investigation that was done back
12 in the '80s.

13 Q. Okay. And, you know, just because of the
14 presence and operation of the smelter there, that
15 doesn't necessarily tell you that there's
16 contamination in the neighborhood. Is that right?

17 A. I'm not sure I understand that question.

18 Q. Okay. Well, you knew that there was a
19 smelter operating there for the last, you know, better
20 part of a century. Right?

21 A. That's correct.

22 Q. Okay. And its associated operations and
23 things, but just because your knowledge that there was
24 a smelter there doesn't mean that you knew that there

1 was necessarily contamination in the neighborhood.

2 Right?

3 A. I'm having a hard time understanding that
4 question.

5 Q. Okay. The simple fact that you knew the
6 smelter was there in operation for 80 years doesn't
7 leave you to conclude that there would be
8 contamination in the neighborhood prior to sampling
9 the neighborhood. Is that fair?

10 A. I think that's fair and, again, you know, the
11 company at the time proposed a sampling regime that
12 was in turn approved by -- approved by the State.

13 (Exhibit No. 123 marked.)

14 Q. Hand you -- I handed you Exhibit 123. It was
15 produced by USMR. It's Responses to LSRP Comments
16 Related to Remedial Investigation Work Plan Addendum
17 Arthur Kill Settlement -- Sediment for the Former U.S.
18 Metals Refining, Bates labeled 121793. Is that fair?

19 A. Yeah, that's what the document is titled.

20 Q. Okay. Do you know who prepared this?

21 A. I am not positive, but I suspect that the
22 document, the first draft of the document was probably
23 prepared by ELM as they were working on the -- on the
24 onsite. This really pertains to the onsite

1 investigation.

2 Q. Okay. Was there a sample of dioxins taken
3 down at Tufts Point?

4 A. I believe there were samples -- I mean,
5 during what time frame?

6 Q. The context that I recall it in I believe it
7 was recent. Do you recall dioxin sampling from Tufts
8 Point area?

9 A. I do not recall recent dioxin sampling in
10 that area. There was some historic dioxin sampling
11 done in that area of the -- which, you know, comprised
12 some of the composites or some of the samples that
13 were part of the composite sampling, which we talked
14 about earlier.

15 Q. So I just saw a reference to Tufts Point.
16 Was that done by EPA or was that done by USMR or do
17 you know?

18 A. I believe the composite samples were done by
19 USMR but, again, those were back in the -- back in
20 the '80s as I understand.

21 (Exhibit No. 124 marked.)

22 Q. I hand you Exhibit 124.

23 MR. SCHICK: I don't know what this is.

24 MR. NIDEL: This is exactly why I'm

1 wanting to know that.

2 MR. SCHICK: Is there just -- is
3 there --

4 MR. NIDEL: It must just be that there's
5 one, yeah.

6 MR. SCHICK: Okay. There we go.

7 MR. NIDEL: I don't know what the secret
8 is of that.

9 MR. SCHICK: Hang on a sec.

10 Q. (By Mr. Nidel) All right. So you have now
11 Exhibit 124?

12 A. Yes, I do.

13 Q. Okay. That's that original USMR dioxin/furan
14 sampling plan. Is that right?

15 A. When you say original, what are you referring
16 to?

17 Q. Well, I just know that on the last page it
18 talks about the correlation with metals.

19 A. Yeah, this is the work plan prepared by
20 Arcadis to -- that was associated with the sampling in
21 2015 I believe.

22 Q. Okay. And that work plan was not followed.
23 Correct?

24 A. I don't recall that there was exercise of

1 correlating the dioxin with metals, no.

2 Q. And we talked about it, but do you know why
3 that was?

4 A. I don't recall.

5 (Exhibit No. 125 marked.)

6 Q. I'm going to give you Exhibit 125 to your
7 deposition. Well, I guess Exhibit 125. Can you
8 identify Exhibit 125?

9 A. It's a document entitled Dioxin/Furan Work
10 Plan: USMR On-Site Sampling.

11 Q. Okay. Is that the updated work plan?

12 A. Well, one of them says onsite sampling. The
13 other one says offsite delineation sampling.

14 Q. Okay. Good point. So the offsite
15 correlation with metals was never done. Right?

16 A. Not to my knowledge.

17 Q. The onsite sampling in the north warehouse
18 area was done. Right?

19 A. Say that again.

20 Q. The onsite sampling in the north warehouse
21 area, west perimeter was done. Right?

22 A. Yes.

23 Q. Okay. And if you look on the second page,
24 the back, it's -- 812 is the last Bates number?

1 A. Yes.

2 Q. Okay. It says, Based on this review, it was
3 determined the samples will likely be collected at
4 depth between 3 and 3 1/2 feet below ground surface.
5 Right?

6 A. That's what it says.

7 Q. Okay. So you were looking for dioxins from
8 soils impacted by dioxins from the smelter operations
9 and you were going down to 3 and 3 1/2 feet. Right?

10 A. That's what it says.

11 Q. Is that where the samples were ultimately
12 taken from?

13 A. I believe they generally were.

14 Q. Did you sample the neighborhood at 3 to 4
15 feet deep?

16 A. I don't believe that -- as part of the dioxin
17 sampling, is that what you're asking?

18 Q. No. For -- for anything for metals. Did you
19 sample the neighborhood for metals at 3 to 4 feet?

20 A. Yes.

21 Q. Okay. Only after you had exceedances above
22 that. Correct?

23 A. The way the tech regs required delineation to
24 be performed is you continue to collect samples from

1 deeper and deeper intervals until you reach clean.

2 Q. Okay.

3 A. So I mean, in some cases we've obtained
4 samples from use areas within the AOC that have been
5 down to, you know, 6 or 7 feet in some cases.

6 Q. And, again, that was only in the circumstance
7 where the sampling above that was not clean. Correct?

8 A. I think -- yeah, I think that's what I just
9 said.

10 Q. So is that right?

11 A. Yes.

12 Q. Okay. So you only went to that depth if you
13 found dirty samples above that depth. Right?

14 A. We continued to take samples at decreasing
15 depth intervals until we came up with clean samples.

16 (Exhibit No. 126 marked.)

17 Q. I've handed you Exhibit 126. Do you know
18 what 126 is?

19 A. It looks as a draft, a response to comment on
20 dioxins and furans.

21 Q. Okay. If you look at Page 9?

22 A. Okay.

23 Q. It says, We also evaluated the data Onsite
24 where there had been no industrial operations, the

1 Tufts Point area. Was that -- was that just the
2 composite sampling that was done and mapped out as
3 part of that Amax report?

4 A. I'm assuming that's the case because I don't
5 recall any other sampling in that area that was
6 performed by USMR.

7 (Exhibit No. 127 marked.)

8 Q. And there was modeling of dioxins that was
9 done, as well. Right?

10 A. I believe that Arcadis prepared a dioxin
11 model.

12 Q. What did that model show?

13 A. I believe it showed that dioxin releases, if
14 you will, from the facility had a negligible impact on
15 soil dioxin concentrations.

16 Q. Okay. If you turn to Page 5 of that. And
17 it's your understanding that Arcadis is the one that
18 performed that modeling. Right?

19 A. That's my understanding, yes.

20 Q. Okay. The third bullet point under Air
21 Modeling Assumptions, it says, For the time period
22 under --

23 A. What -- are you still on Page 5?

24 Q. I am.

1 MR. SCHICK: Last sequence.

2 Q. (By Mr. Nidel) Thank you. On Page 5, third
3 bullet point: For the time period under evaluation
4 ('56 through '86), it was assumed that stack sources
5 were controlled by a baghouse based on the control
6 efficiencies provided in EPA AP-42 guidance. Control
7 efficiency of 99 percent or 99.5 percent was assumed
8 based on AP-42. Do you see that?

9 A. I do.

10 Q. Okay. Do you know if the baghouses onsite
11 from 1956 through 1986 were 99.5 or 99 percent
12 effective at capturing emissions?

13 A. I'm not aware of the control efficiencies of
14 the baghouses during that period of time. There might
15 have been something Mr. Fenn opined on.

16 Q. Okay. Are you aware of lots of complaints of
17 opacity, violations of opacity, baghouse malfunctions,
18 baghouse upgrades that occurred to reduce emissions
19 over the course of that period from '56 to '86?

20 A. I'm aware that there were complaints. I'm
21 aware that there were ongoing improvements made to the
22 facility during that period of time.

23 Q. Okay. So is it your understanding based on
24 your review of the historical operations at the site

1 that those baghouses were operating at 99 percent or
2 greater efficiency?

3 A. Again, I didn't get into any detail on the
4 control efficiencies of the individual baghouses.

5 Q. But here's the thing: You looked -- you did
6 get into a determination as to whether or not dioxins
7 from your facility polluted in neighborhood. Right?

8 A. There has been various analyses of dioxins.

9 Q. Okay. And the project that you managed, part
10 of that was to determine whether or not dioxins were
11 delineated offsite from emissions that occurred
12 onsite. Right?

13 A. Yes, we did that under the direction of the
14 LSRP most recently and did delineate dioxin to his
15 satisfaction.

16 Q. Okay. And you did a model and that model was
17 based on certain control efficiencies of the
18 baghouses. Right?

19 A. That's my understanding.

20 Q. Okay. So did you tell Arcadis that they
21 should assume that those baghouses were not
22 necessarily working as AP-42 might predict because you
23 know that there was opacity going out the top of the
24 stack and there were baghouses that were defective and

1 then needed to be upgraded because they were not
2 capturing at 99 or better percent efficiency?

3 MR. SCHICK: Objection. Form.

4 A. For purposes of this analysis, I -- I did not
5 give Arcadis any direct guidance on what AP-42 factors
6 to incorporate into its modeling effort.

7 Q. (By Mr. Nidel) Okay. Let me ask you this:
8 If the baghouses were not 99 percent or greater
9 efficient, that modeling would not be accurate.
10 Right?

11 MR. SCHICK: Objection. Form.

12 A. Control efficiency is one parameter that goes
13 into a model. So would the outputs of the model be
14 different using a different control efficiency, yes.

15 Q. (By Mr. Nidel) And you did not investigate
16 what the actual control efficiencies were of those
17 baghouses prior to that modeling. Correct?

18 A. No, I did not.

19 Q. And just to be clear, you USMR or Freeport
20 Minerals did not do that. Right?

21 A. I am not aware of any assessment of the
22 baghouse efficiencies that were occurring during that
23 time period.

24 Q. Okay. So none of the modeling that occurred

1 at your direction are you aware of having the benefit
2 of assessment of baghouse efficiencies from actual
3 operational data on the site. Right?

4 A. The Arcadis model assumed a certain
5 efficiency and that was -- that was not -- that was
6 based on AP-42 factors. It was not based on what may
7 or may not have been the efficiencies during actual
8 operations.

9 (Exhibit No. 128 marked.)

10 Q. I have handed you Exhibit 128 to your
11 deposition. 128 is a letter from Radian July 27th,
12 1989 from Andrew Miles and it attaches dioxin data
13 from the soil testing of the site. Is that correct?

14 A. It does.

15 Q. Okay. And is that the -- on Page 2 is that
16 the map that you're familiar with of the composite
17 testing that was done?

18 A. Yes, it does.

19 Q. Okay. And it shows --

20 A. Yes, it is.

21 Q. Okay. And it shows that the northwest
22 quadrant where the warehouse is was the lowest dioxin
23 level onsite. Correct?

24 A. Yes. On a composite basis, that west portion

1 of the north warehouse shows the lowest concentration.

2 Q. And that's where you chose to sample to look
3 for dioxins at the perimeter of the site. Right?

4 MR. SCHICK: Objection. Form.

5 A. That's -- that's a part of the area which was
6 generally sampled during the 2015 sampling.

7 Q. (By Mr. Nidel) Who chose to sample there?

8 MR. SCHICK: Objection. Form. Asked
9 and answered.

10 A. In order to address the delineation
11 information that was requested by the LSRP, we
12 proposed those locations as being where the LSRP
13 indicated that delineation was required. So it was a
14 joint discussion between USMR and Arcadis to develop
15 that sampling program.

16 MR. NIDEL: We can go off the record.

17 THE VIDEOGRAPHER: We are off the
18 record. It's 6:02.

19 (Break.)

20 THE VIDEOGRAPHER: Okay. We are back on
21 the record. It is 6:04. This is a continuation of
22 Tape 13.

23 Q. (By Mr. Nidel) We're almost done here. I
24 just want to get you to identify a few documents for

1 us.

2 (Exhibit No. 129 marked.)

3 Q. I hand you Exhibit 129. Can you --

4 MR. SCHICK: Go ahead. Go ahead.

5 THE WITNESS: No. Go ahead.

6 MR. SCHICK: I'll get it. Thanks.

7 Q. (By Mr. Nidel) Can you identify Exhibit 129?

8 A. It looks like 129 is an excerpt from my
9 handwritten notebook dated October 24th, 2013, titled
10 a meeting with LSRP.

11 Q. Okay. And does it look like Exhibit 129 is a
12 subset of your handwritten notebook?

13 A. It does appears to be that, yes.

14 (Exhibit No. 130 marked.)

15 Q. Okay. And I'll do the same thing with
16 Exhibit 130.

17 A. Would you like me to say for the record
18 what --

19 Q. Yeah, if you could identify --

20 A. -- what it is?

21 Q. -- it for the record by Bates number and then
22 tell us what it is.

23 A. Sure. It's Bates No. 843036 and it appears
24 to be an excerpt from my handwritten notes -- actually

1 a number of my handwritten notes generally discussing
2 dioxin starting in January 8th of 2015 and continuing
3 through the end of 2015. It appears that the early
4 part of the notes deals more specifically with some
5 dioxin issues, but there's also a number of other
6 notes of meetings conference calls, et cetera, that
7 are included. So quite a few different things that
8 this packet includes.

9 MR. NIDEL: Okay. There's -- there's
10 one other document that we were looking for. I don't
11 think we're going to find it. If you don't mind
12 asking questions, I don't think we're going to find
13 it. I think we're about to give up on that.

14 MR. SCHICK: Yeah. Okay.

15 MR. NIDEL: But obviously if I do come
16 back and ask a question, you have a chance to follow
17 up on that.

18 MR. SCHICK: Sure.

19 EXAMINATION

20 QUESTIONS BY MR. SCHICK:

21 Q. Mr. Brunner, I just have a couple questions.
22 Would you retrieve Exhibit No. 112 from that stack?

23 A. Sure.

24 Q. Exhibit 112 is an e-mail you were shown

1 earlier this afternoon by Mr. Nidel that includes as a
2 part of it an e-mail from Mike Cooper to Vajira that
3 lists two scenario descriptions for the Scenarios 1
4 and 2. Do you see that at the bottom?

5 A. I do.

6 Q. And you discussed with Mr. Nidel the two
7 stack heights that were assumed of 100 feet and 225
8 feet?

9 A. Yes.

10 Q. And do you recall also looking at various
11 decline curves, both yesterday and today, out of the
12 McVehil air modeling in which there was reference to
13 two stacks at 100 feet and 225 feet?

14 A. I recall that.

15 (Exhibit No. 131 marked.)

16 Q. All right. Let me show you what I've marked
17 as Exhibit 131 to your deposition. And for reference
18 this bears Bates No. 833366, the bottom right-hand
19 corner of the first page, yes?

20 A. Yes, it does.

21 Q. And the subject line is Deposition Modeling
22 For USMR Carteret Smelter. Is that correct?

23 A. Yes.

24 Q. And who's this -- who is this from?

1 A. It's from George McVehil.

2 Q. I'd like to direct your attention to the
3 second paragraph under 2, Model Simulations. Are you
4 with me?

5 A. Yes.

6 Q. Starting with the sentence reading One model
7 run, would you please read that?

8 A. One model run (scenario No. 1) assumed cupola
9 and converter stack emissions at 100 foot height; the
10 second run (scenario No. 2) assumed stack heights of
11 225 feet. For later periods when stack heights are
12 known, emissions from the applicable sources were
13 modeled at the actual known heights for the time
14 periods when those heights were in use.

15 Q. That's good enough. Thank you. Turn to the
16 next page, please.

17 A. (Complying.)

18 Q. You see Section 3 says Assumption, Input
19 Data, and Calculation, yes?

20 A. Yes.

21 Q. The first bullet point about -- under Major
22 Assumptions, would you read that for us, please?

23 A. Major assumptions made in calculating
24 emissions, in addition to those noted above, were:

1 Emission factors represent uncontrolled total
2 particulate matter emissions for the applicable copper
3 smelting operations as given in USEPA publication
4 AP-42.

5 Q. And the next one?

6 A. Lead emissions were assumed to comprise 10
7 percent of total particulate matter for all sources.

8 Q. And the next one?

9 A. Input of concentrate to the smelter was four
10 times the mass output of blister copper (represented
11 as typical in AP-42).

12 Q. The next one?

13 A. Particle size distributions for lead
14 emissions were taken as identical to the size
15 distributions given in AP-42 for total particulate
16 matter from the applicable smelter source types.

17 Q. And the next one?

18 A. Emissions prior to 1953 represent
19 uncontrolled emissions. It was assumed that pollution
20 controls from 1906 to 1952 were either nonexistent or
21 of minimal effectiveness.

22 Q. And finally, if you would please turn to the
23 last page of Exhibit 131. Do you see a Table 2?

24 A. I do.

1 Q. And it's entitled Estimated Lead Emissions by
2 Source For Two Time Periods USMR Carteret Smelter. Do
3 you see that?

4 A. Yes.

5 Q. Is there a listing of a 420-foot stack on the
6 converter?

7 A. There is. It's the fourth row in the data
8 table.

9 Q. And for what period of time was that 420-foot
10 stack included in the modeling?

11 A. Based on this table, from 1949 till 1986.

12 Q. Were total lead emissions for the 1906 to
13 1952 period included for the 400-foot stack -- I'm
14 sorry, the 420-foot fact?

15 A. Say that again, please.

16 Q. Yes. Were total lead emissions for the
17 period 1906 to 1952 included for the 420-foot stack?

18 MR. NIDEL: Objection to form and
19 foundation.

20 A. Yes.

21 Q. (By Mr. Schick) And the assumption was
22 1,507?

23 A. Total lead emissions in tons, yes.

24 Q. And what was the amount that was assumed for

1 the period or input for the period from 1953 to 1986?

2 A. The total lead emissions during that period
3 were 3,060 tons.

4 Q. Thank you.

5 MR. SCHICK: Those are all my questions.

6 MR. NIDEL: I just have a little bit of
7 follow-up on that.

8 FURTHER EXAMINATION

9 QUESTIONS BY MR. NIDEL:

10 Q. Was there a 300-foot stack on the facility at
11 some point?

12 A. I'm not aware of a 300-foot stack.

13 Q. Okay. Was a 300-foot stack modeled as
14 representative of the table you just looked at?

15 A. There's no -- there's no reference to a
16 300-foot stack in the table.

17 Q. Was the lead plant modeled in the McVehil
18 model, was that included in the table?

19 A. There's -- there's no reference to a lead
20 plant in this table.

21 Q. The cupola at one point was vented through
22 the 400-foot stack. Correct?

23 A. I don't know if it was. It looks like the
24 cupola went through a short stack from 1925 to 1961

1 and from a 250-foot stack from 1981 to 1986. I'm not
2 aware of where the cupola emissions were directed
3 during the period '61 through '81. That might have
4 been something Mr. Fenn was aware of.

5 Q. Okay. Well, it's my understanding that
6 cupola stack -- cupola was vented through the 400-foot
7 stack for some time period but that wasn't included in
8 the McVehil model either, was it?

9 MR. SCHICK: Objection. Form.

10 A. It's not shown in this particular table.

11 Q. (By Mr. Nidel) Were the Dore furnaces, the
12 emissions from the Dore furnaces included in the
13 McVehil model?

14 A. I do not know.

15 Q. Well, they're not included in the table.
16 Right?

17 A. Well, they're not in the table.

18 Q. Okay. Were emissions from the reverberatory
19 furnaces included in the -- other than the fugitives
20 were the point source emissions from the reverberatory
21 furnaces included in McVehil's modeling according to
22 the table?

23 A. Say that again, please.

24 Q. Were the emissions from the reverberatory

1 furnaces, other than fugitive emissions, were those
2 point source emissions included in the modeling done
3 by McVehil according to the table?

4 A. Reverb emissions are not called out in any
5 other way in this table besides as fugitives.

6 Q. Okay. So your understanding of reading the
7 table would be that they were not included. Correct?

8 A. That would be correct, unless they were
9 included in some of the cupola information.

10 Q. Okay. And the assumptions that you read
11 through on -- under 3.1?

12 A. Yes.

13 Q. Without going into each one, you have no idea
14 whether those assumptions accurately reflect what was
15 happening on the smelter facility for any period of
16 historical time, do you?

17 A. Say that again.

18 Q. You don't know whether those assumptions and
19 emissions factors from AP-42 or that lead emissions
20 comprise 10 percent or any of those assumptions,
21 whether those were accurate as to the factual history
22 of the facility. Right?

23 A. They were -- they were assumptions used in
24 the model.

1 Q. Right.

2 A. That's -- that's --

3 Q. But you don't know how accurate they are, do
4 you?

5 A. I don't know how accurate each and every one
6 of those assumptions is.

7 Q. Okay. You were asked by counsel to read
8 those assumptions. Right?

9 A. Yes.

10 Q. Okay. But you don't know -- your testimony
11 is only to read them, not to -- not to attest to the
12 factual veracity of those assumptions. Right?

13 A. I -- I read the assumptions.

14 Q. Okay. Because you don't know whether those
15 assuming are correct. Right?

16 A. I'm not testifying that they are correct. I
17 just read them.

18 Q. Okay.

19 MR. NIDEL: I have no further questions
20 at this time. There were some issues -- there are
21 some issues. There were documents produced just in
22 the last week that appear to have been produced to
23 counsel weeks if not months prior to last week. There
24 are also documents that were not produced in native

1 form, but I think those are small issues and probably
2 won't require bringing this witness back but I think
3 at this point we have no further questions but we
4 don't -- we're not necessarily agreeing to close the
5 deposition.

6 MR. SCHICK: Deposition is over.

7 THE VIDEOGRAPHER: Okay. We are off the
8 record. It is 6:21. This is the end of Tape 13.

9 (Deposition concluded at 6:21 p.m.)

10 (Signature reserved.)

11 * * * * *

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1 CHANGES AND SIGNATURE

2 WITNESS NAME: JOSEPH A. BRUNNER

3 DATE OF DEPOSITION: JUNE 7, 2018

| 4 PAGE/LINE | CHANGE | REASON |
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1 I, JOSEPH A. BRUNNER, have read the foregoing
deposition and hereby affix my signature that same is
2 true and correct, except as noted above.

3
4
5

JOSEPH A. BRUNNER

6
7

THE STATE OF _____)
8 COUNTY OF _____)

9 Before me, _____, on this
day personally appeared JOSEPH A. BRUNNER, known to me
10 (or proved to me under oath or through
_____) (description of identity
11 card or other document) to be the person whose name is
subscribed to the foregoing instrument and
12 acknowledged to me that they executed the same for the
purposes and consideration therein expressed.

13 Given under my hand and seal of office this
_____ day of _____,
14 _____.

15
16
17

NOTARY PUBLIC IN AND FOR
18 THE STATE OF _____
COMMISSION EXPIRES: _____

19
20
21
22
23
24

1 THE STATE OF TEXAS:
COUNTY OF FT. BEND:

2

I, Tamara Vinson, a Certified Shorthand
3 Reporter and Notary Public in and for the State of
Texas, do hereby certify that the facts as stated by
4 me in the caption hereto are true; that the above and
foregoing answers of the witness, JOSEPH A. BRUNNER,
5 to the interrogatories as indicated were made before
me by the said witness after being first duly sworn to
6 testify the truth, and same were reduced to
typewriting under my direction; that the above and
7 foregoing deposition as set forth in typewriting is a
full, true, and correct transcript of the proceedings
8 had at the time of taking of said deposition.

9 I further certify that I am not, in any
capacity, a regular employee of the party in whose
10 behalf this deposition is taken, nor in the regular
employ of his attorney; and I certify that I am not
11 interested in the cause, nor of kin or counsel to
either of the parties.

12

GIVEN UNDER MY HAND AND SEAL OF OFFICE, on
13 this, the 21st day of June, 2018.

14

15

16

17

Tamara Vinson, Texas CSR No. 3015
Expiration Date: 12-31-2018

18

19
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Houston, Texas 77002
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23

24