

ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB,)
ENVIRONMENTAL LAW AND)
POLICY CENTER, PRAIRIE)
RIVERS NETWORK, and)
CITIZENS AGAINST RUINING)
THE ENVIRONMENT,)
Complainants,)
vs.) No. PCB 13-15
MIDWEST GENERATION,)
Defendant.)

TRANSCRIPT of the PROCEEDINGS taken before
HEARING OFFICER BRADLEY HALLORAN at the James R.
Thompson Center, 100 West Randolph Street, Room
503, Chicago, Illinois, on the 12th day of June,
2023, A.D., at 9:00 o'clock a.m.

Reported by: Kari Wiedenhaupt, CSR

License No.: 084-004725

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I N D E X

WITNESS	EXAMINATION
RICHARD GNAT	
By MS. KRISTEN LAUGHRIDGE GALE	12
By MS. FAITH BUGEL	74
By MS. KRISTEN LAUGHRIDGE GALE	142
DOUGLAS DORGAN and MICHAEL MAXWELL	
MS. JENNIFER T. NIJMAN	164

E X H I B I T S

NUMBER	MARKED FOR ID
RESPONDENT'S EXHIBIT	
No. 1514	26
No. 1515	40
No. 1516	41
No. 1517	59
COMPLAINANTS' EXHIBIT	
No. 1518	90
No. 1519	108
No. 1520	129
No. 1521	159

1	RESPONDENT'S EXHIBIT	
2	No. 1701	166
3	No. 1702	203
4	No. 1703	258

6 ADMITTED INTO EVIDENCE

7	RESPONDENT'S EXHIBIT	
8	No. 1514	28
9	No. 1515	49
10	No. 1516	49
11	No. 1517	64

12	COMPLAINANTS' EXHIBIT	
13	No. 1519	119
14	No. 1520	134
15	No. 1521	162

16	RESPONDENT'S EXHIBIT	
17	No. 1703	261

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1 HEARING OFFICER HALLORAN: All
2 right. Good morning, everybody. My name is
3 Bradley Halloran. I am the hearing officer with
4 the Illinois Pollution Control Board. I'm also
5 assigned to this case, PCB 13-15. It's an
6 enforcement case. We are in the liability phase.
7 This case was continued on the record from May
8 19th, 2023. Today is June 12th, 2023.

9 And before I go any farther,
10 would the parties like to introduce themselves,
11 please?

12 MS. BUGEL: Yes. I am Faith Bugel
13 here on behalf of the Sierra Club, and with me is
14 Mr. Abel Russ with Environmental Integrity Project
15 representing Prairie Rivers Network.

16 HEARING OFFICER HALLORAN: Thank
17 you. Ms. Nijman and Ms. Gale?

18 MS. GALE: Yes. Kristen Gale here
19 with Jennifer Nijman and Drew Nishioka on behalf
20 of Midwest Generation, LLC.

21 HEARING OFFICER HALLORAN: Thank
22 you.

23 Do we have any housekeeping
24 matters before we proceed?

1 MS. GALE: Yes, a couple. Unless
2 you want to go first?

3 MS. BUGEL: One housekeeping matter
4 we had was an e-mail that I had sent you on behalf
5 of both Complainants and Respondent seeking an
6 agreed extension to the deadline for filing all
7 electronic exhibits. We were jointly seeking 14
8 days after the last date of hearing so that we
9 could file electronic exhibits all at once.

10 HEARING OFFICER HALLORAN: Okay.
11 Yeah, I saw that. I was kind of waiting for a
12 motion, since you did a motion on the extension to
13 do the interlocutory appeals.

14 But there is no objection. I
15 will allow it. I will look for the e-mail, and I
16 will put that in an order after this hearing.

17 MS. BUGEL: Very good. Thank you.

18 HEARING OFFICER HALLORAN: Thank
19 you.

20 MS. BUGEL: And just one point of
21 inquiry on electronic exhibits, would it be
22 possible for us to file them by providing some
23 sort of flash drive or jump drive instead of
24 through the website? I just -- I am -- last time

1 that is how we handled it, and I don't know how it
2 will work to upload the volume of exhibits we
3 have, so --

4 MS. GALE: I mean, if I might
5 suggest, maybe we jointly contact the Clerk, since
6 he handles that and see what he thinks?

7 HEARING OFFICER HALLORAN: Yeah, if
8 you could.

9 MS. GALE: Yeah.

10 HEARING OFFICER HALLORAN: Because
11 he's the guy who does all the work on that, Don
12 Brown.

13 MS. GALE: Yeah.

14 MS. BUGEL: Okay.

15 HEARING OFFICER HALLORAN: I don't
16 see where it would be a problem, but, you know,
17 who knows.

18 MS. BUGEL: Okay, yeah.

19 HEARING OFFICER HALLORAN: I don't
20 know. Thank you for bringing that to my
21 attention. I know there is a lot of stuff.

22 Anything else?

23 MS. GALE: Two things.

24 One, Mr. Hearing Officer, our

1 original order of witnesses was Mr. Gnat, and then
2 Ms. Sharene Shealey and then our experts.
3 Ms. Sharene Shealey woke up this morning very ill,
4 and she is hopeful she will be able to make it,
5 but we need to -- we may have to start with
6 Mr. Gnat, finish him, and then we may have to move
7 on with the -- our groundwater experts, simply
8 because I can tell you, from what she tells me, we
9 don't want her here right now.

10 HEARING OFFICER HALLORAN: That's
11 unfortunate.

12 MS. GALE: Yeah.

13 HEARING OFFICER HALLORAN: Okay.
14 That -- that will be fine.

15 MS. GALE: Okay.

16 HEARING OFFICER HALLORAN: That will
17 be fine. And I think you have one more thing,
18 Ms. Gale?

19 MS. GALE: I do. Thank you, sir.

20 At the end of the last week, I
21 went through pictures that are in Exhibit 1513
22 with Mr. Gnat. I -- the Complainants requested,
23 and I agreed, to modify the pictures, because the
24 bates numbers were within the colored part and

1 move the Bates numbers to the bottom.

2 I unfortunately also misread my
3 own notes when I read in the Bates numbers from my
4 notes, and so I just want to correct for the
5 record that on -- in the transcript of that day,
6 which is May 19th, on page 209, line 3, I
7 identified the photo as -- incorrectly identified
8 the photo as 108351. The correct Bates number for
9 that photo is 108350. The next photo on the same
10 page, transcript page 209, line 21, I incorrectly
11 identified the photo as 108350. The correct Bates
12 is 108352.

13 On page 2 -- excuse me. On
14 transcript page 210, line 12, I incorrectly stated
15 the Bates number as 108352. The correct Bates
16 number is 108375. And finally, on transcript page
17 210, line 20, incorrect Bates number was 108375.
18 The correct number is 108386.

19 We have provided the pages to
20 Complainants' counsel, Mr. Hearing Officer, and
21 Ms. Hutchins -- it's not Hutchins. Your name is
22 not Hutchins. Horton. Thank you.

23 And so we are asking that just
24 simply take out the photos that were in Gnat

1 Binder No. 2, and replace them with the photos
2 that have the Bates numbers legible on the bottom.

3 HEARING OFFICER HALLORAN:

4 Ms. Bugel?

5 MS. BUGEL: No objection.

6 HEARING OFFICER HALLORAN: Great.

7 The record will so reflect. Thank you so much.

8 Anything else?

9 MS. GALE: Nothing from us.

10 HEARING OFFICER HALLORAN: All
11 right. I think Mr. Gnat is up here. He is in the
12 middle of Ms. Gale's direct. If you could raise
13 your right hand, Mr. Gnat?

14 THE WITNESS: Good morning.

15 (Whereupon, the witness was duly
16 sworn.)

17 HEARING OFFICER HALLORAN: Thank
18 you, Mr. Gnat.

19 Ms. Gale, you are up.
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1 WHEREUPON:

2 R I C H A R D G N A T

3 called as a witness herein, having been first duly
4 sworn, deposeseth and saith as follows:

5 D I R E C T E X A M I N A T I O N (Cont).

6 by Ms. Gale

7 Q. Thank you.

8 Good morning, Mr. Gnat.

9 A. Good morning.

10 Q. I just went through discussing the
11 photos we -- that we discussed of the northeast
12 area at Joliet 29.

13 Do you recall that discussion?

14 A. Yes, I do.

15 Q. And that -- you took those photos on
16 one of your inspections of the northeast area,
17 right?

18 A. Correct.

19 Q. And when did you start those
20 inspections, about?

21 A. Somewhere in 2009, or so.

22 Q. And when you first started the
23 inspections in 2009, did you see ash in those
24 inspections?

1 A. Yeah. There were some areas that
2 had some bare ground and some rural development
3 that I identified, and within that I saw soil, and
4 I saw some evidence of the ash or cinders within
5 that in the -- with the soil itself.

6 **Q. And then other than what you**
7 **identified in your report of ash mixed in with the**
8 **soil itself, have you ever seen ash anywhere else?**

9 A. No, I have not, outside of the areas
10 that we identified over our inspections and then
11 repaired, correct.

12 **Q. And we covered this just a couple**
13 **weeks ago, but -- well, obviously you have been to**
14 **Joliet 29 Station, right?**

15 A. Yes, I have.

16 **Q. And can you just describe the**
17 **surrounding area of Joliet 29 Station, please?**

18 A. Sure. The -- to the -- to the south
19 is the Des Plaines River and the intake channel
20 for the plant. To the east is the Brandon Lock
21 and Dam. To the north is Channahon Road followed
22 by various small commercial, light industrial type
23 activity, and then to the west is a former
24 industrial area, which has now been redeveloped.

1 **Q. And it's redeveloped. Do you know**
2 **sort of about the redevelopment, where it's at?**

3 A. I believe that's still industrial
4 use. I don't know if it's a trucking terminal or
5 not, but it's certainly still industrial use.

6 **Q. And you mentioned the Brandon Road**
7 **Lock and Dam. What is that?**

8 A. The lock and dam is -- the dam
9 itself is not a hydroelectric dam or anything. I
10 believe it's a structure that was put in place
11 along with other lock and dams for flood control,
12 and it also allows for barges and boats to move
13 through -- through the Des Plaines River area
14 there.

15 **Q. And so when you do your inspections**
16 **or you're at Joliet 29 Station, do you see boats**
17 **and barges on the river?**

18 A. Yes, on a regular basis.

19 **Q. Okay. I want to go back and talk**
20 **about your testimony in May about the northwest**
21 **area at Joliet 29, and I believe you stated you**
22 **did the sampling there to determine whether it was**
23 **coal combustion byproduct; is that right?**

24 A. Correct.

1 Q. And why was that sampling done?

2 A. There was a project being
3 anticipated by the station to construct a wind
4 break or a windshield -- excuse me -- for the coal
5 pile area, and an RPF did come out for that, and
6 my company did bid on that.

7 Q. Now, I want to turn back to our
8 discussion about the chloride in the groundwater
9 at Joliet 29.

10 Do you recall that discussion?

11 A. Yes.

12 Q. And does -- in May we discussed that
13 Channahon Road is directly -- and you just
14 mentioned that Channahon Road is directly adjacent
15 to the north of Joliet 29 Station, right?

16 A. Correct.

17 Q. And what is spread on roads in
18 winter in Illinois on roads like Channahon Road?

19 A. Road salt.

20 Q. And, to your knowledge, what is road
21 salt composed of?

22 A. My understanding, it's primarily a
23 calcium carbonate-type material.

24 Q. And --

1 A. Or calcium chloride.

2 Q. And then we touched upon the permit
3 applications. Did KPR -- and I believe you
4 testified earlier in May that KPRG acted as the
5 clearinghouse for the Joliet 29 operating permit
6 application; is that right?

7 A. Correct.

8 Q. And, to your recollection,
9 approximately how big was that operating permit
10 application?

11 A. Oh, hundreds of pages. I believe we
12 had it in a three-inch or so binder per copy.

13 Q. And how many hours was it just for
14 KPRG to prepare that application?

15 A. KPRG hours alone on the operating
16 permit was into upper hundreds of hours easily,
17 and similar for the construction permit
18 application, even though some information is the
19 same for those, but there is also other
20 information that's required in the construction
21 permit. So for that as well, into the hundreds of
22 hours.

23 Q. And as you were the clearinghouse,
24 and I think you testified to this -- the operating

1 permit -- excuse me.

2 The operating application had
3 documents from other consultants, right?

4 A. Correct.

5 Q. And so your estimate of hundreds of
6 hours doesn't include their work?

7 A. That's correct, yes.

8 MS. BUGEL: I'm going to object to
9 the leading nature of the questions.

10 HEARING OFFICER HALLORAN:

11 Sustained.

12 BY MS. GALE:

13 Q. And you mentioned the construction
14 permit application. How big was that -- the
15 Joliet 29 construction permit application?

16 A. The same. Hundreds of pages, and I
17 believe the three-inch type binder, if not larger.
18 Yeah, three-inch binder.

19 Q. And just so we make the record
20 clear, approximately how many hours did it take
21 KPRG to collect the Joliet 29 construction permit
22 application?

23 A. You know, into the upper hundreds of
24 hours.

1 Q. All right. I'm going to move on to
2 Powerton, and if you could open to your Gnat Book
3 3, please.

4 Ready, Mr. Gnat?

5 A. Yes.

6 Q. Okay. Turning to the first tab,
7 this is the maps from Exhibit 1307. Can you
8 describe what those map -- that map is, please?

9 A. Sure. The first map is a
10 groundwater contour for the silt and clay layer
11 unit for November 21st, and the second one is for
12 the gravely silt -- I'm sorry -- the gravely sand
13 unit for November 2021.

14 Q. Okay. You said the first map is for
15 the silty clay unit. What is -- what is that?

16 A. Well, when we go through the boring
17 logs, there is a discontinuous unit that underlies
18 the Ash Surge Basin, the Service Water Basin,
19 Metals Cleaning Basin, that general area.

20 There is a silty clay layer that
21 underline -- underlies it that is not present a
22 little bit further to the east. It was not
23 present further to the north.

24 So it's not under, for example,

1 the Former Ash Basin. So that unit sits above
2 those -- those basins, and basically water, even
3 though it's hydraulically connected to the sand
4 and gravel underneath it, it doesn't allow water
5 to percolate down quite as fast, and so the water
6 levels are a little bit higher in that unit.

7 Q. And I think you misspoke. You said
8 that unit sits above the basins. The unit sits --

9 A. Below the basins, correct.

10 Q. Thank you.

11 And so for the silty clay unit,
12 which direction is the groundwater?

13 A. Groundwater is flowing to the west.

14 Q. And so for the sand unit, which
15 direction is groundwater?

16 A. Groundwater flows in a northerly
17 direction.

18 Q. And to clarify, what -- was one unit
19 on top of the other?

20 A. Correct. And they are hydraulically
21 connected. So there's no -- if you drill through
22 the silty clay layer, it's -- you encounter the
23 water table and the silty clay layer, and when you
24 get down to the base of it and into the sand and

1 gravel, it's still saturated. There is no break
2 or unsaturated material between them.

3 Q. And how do you know, or how would --
4 how -- well, I will say it this way.

5 How did -- was it discovered
6 that the silt clay unit existed and the sand unit
7 existed?

8 A. Based on boring log interpretations.

9 Q. And can you describe what's
10 happening? You say they are hydrologically
11 connected. What does that mean?

12 A. That, like I said, the -- once you
13 encounter the saturated zone within the silty clay
14 layer, when you get through the base of the silty
15 clay layer into the underlying sands, it's still
16 saturated.

17 So there's no indication that
18 this is a perched water zone or anything. It's
19 just in an area -- since it's a silty clay area,
20 it's just not letting the water percolate down
21 through quite as fast as if you go to the west
22 where you don't have that layer, rain falls down,
23 and it's more of a sandy unit, and it percolates
24 down much, much quicker.

1 Q. And KPRG has submitted -- well, how
2 long has KPRG submitted the groundwater reports to
3 the Illinois EPA for the Powerton station?

4 A. I believe we started doing those in
5 2012. Yeah, 2012/2013 timeframe.

6 Q. And are these maps in those reports?

7 A. Yes, they are.

8 Q. And has Illinois EPA ever disputed
9 the -- your interpretation here of the two units?

10 A. No, they have not.

11 Q. And you said from 2012. So -- and
12 so since 2012, you've reviewed the groundwater
13 levels?

14 A. Yes, I have.

15 Q. Okay. And, to your knowledge, do
16 you recall that the Ash Surge Basin was re-lined?

17 A. Yes, it was.

18 Q. Do you recall when?

19 A. I believe somewhere in the 2012
20 timeframe.

21 Q. 2013?

22 A. 2013, correct.

23 Q. And in your review of the
24 groundwater elevations from 2012 to present, have

1 **you seen the groundwater levels drop?**

2 A. Well, the groundwater levels
3 fluctuate up and down, depending on the season,
4 obviously, and precipitation and so on, but what
5 we did not see is as the ash basin was pumped out
6 and basically dewatered for the construction
7 purposes, we didn't see an effect on water levels
8 around the basin.

9 So one would -- one would
10 interpret that -- if the basin was leaking and
11 they dewatered it for an extended period of time
12 for re-lining, you would see water levels drop,
13 because you have dewatered the basin. We did not
14 see that. And then conversely, when -- once the
15 liner was placed back in and water placed back
16 into the -- you know, the Ash Surge Basin comes
17 back online for slurry and ash. You know, again,
18 if that basin was compromised for some reason,
19 it's a brand new liner, but you would expect then
20 if, in fact, that was associated with the basin
21 leaking, you could see water levels come up again.

22 And we didn't. We just saw
23 standard, normal fluctuations in groundwater over
24 that entire construction time.

1 **Q. So if you see standard fluctuations**
2 **in groundwater, what does that mean to you?**

3 A. That the water levels that we are
4 seeing, those slightly higher water levels within
5 the clay, they are, in fact, the result of that
6 this is a slightly less permeable material. So
7 it's holding up the groundwater. It's not -- not
8 pecculating down quite as fast, but certainly not
9 as a result of adding head from water in the
10 basin.

11 **Q. And we discussed this in May related**
12 **to Joliet 29, but to revisit it for Powerton, in**
13 **2010, how was the -- what constituents was the**
14 **groundwater sampled for?**

15 A. In 2010, that was for the dissolved
16 metals and inorganics that were identified by
17 Illinois EPA under their request to do the
18 voluntary hydrogeologic investigation and
19 groundwater sampling.

20 **Q. And then -- and at Powerton, did you**
21 **also assist in the requirements for the Powerton**
22 **compliance commitment agreement?**

23 A. Yes, I did.

24 **Q. What did you do?**

1 A. I assisted in pulling together the
2 information to establish the groundwater
3 management zone that was agreed upon between
4 Midwest Generation and Illinois EPA, as well as, I
5 believe, an ELUC for the property, environmental
6 land use control, ELUC, E-L-U-C.

7 **Q. And, to your knowledge, the**
8 **groundwater -- is the groundwater management zone**
9 **still in effect?**

10 A. That's my understanding, yes.

11 **Q. Same question for the ELUC, the**
12 **E-L-U-C. Is the ELUC still in effect?**

13 A. Yes, that's -- that actually sits
14 right on the deed.

15 **Q. And then in -- again, similar to**
16 **Joliet 29, in 2015 at Powerton related to sampling**
17 **of the groundwater, what happened?**

18 A. In 2015, the federal CCR rules came
19 into -- into play, and under that program, the
20 requirement was for total inorganics. So you no
21 longer filter it in the field. It's just a total
22 metals analysis, and the list of parameters,
23 slightly different.

24 **Q. I want to turn to the service water**

1 **basin at Powerton.**

2 **Recently, did KPRG conduct an**
3 **investigation of the contents of that pond?**

4 A. Yes.

5 **Q. And what was that investigation?**

6 A. They did -- we did a bathymetric
7 survey for that, as well as some sampling of the
8 sediment within the basin and analyzed it for
9 physical parameters to evaluate whether or not it
10 might, in fact, have some component of ash to it
11 or not.

12 **Q. And what were -- what was the**
13 **conclusion of the investigation?**

14 A. Based on a bathymetric survey and on
15 the sampling, the nature of the materials of the
16 sediments accumulating -- first off, there wasn't
17 very much accumulating, and the nature of it was
18 not ash-like, so to speak, and my understanding is
19 that the Illinois EPA agreed with that conclusion.

20 **Q. Now, I want to turn to the East Yard**
21 **Runoff Basin. Are you familiar with that basin?**

22 A. Yes.

23 **Q. What is it?**

24 A. That is a located to the south and

1 slightly west of the Ash Surge Basin and the Ash
2 Bypass Basin, and my understanding is that is
3 primarily surface runoff, a stormwater runoff
4 retention pond.

5 **Q. And under the CCAs, did you assist**
6 **in the complying with the CCAs related to the East**
7 **Yard Runoff Basin?**

8 A. Yes, we did.

9 **Q. What did you do?**

10 A. I believe under the CCA we had to
11 sample it for eight or nine rounds of sampling and
12 analyze it for parameters specified, and we did
13 that and submitted that to the Agency.

14 **Q. And by sampling, what did you**
15 **sample?**

16 A. The water. The water -- I don't
17 remember if it was the intake or the outfall from
18 the East Yard Basin.

19 **Q. Can you turn to the next exhibit in**
20 **your book marked for identification as 1514?**

21 A. Yes.

22 (Whereupon, Respondent's Exhibit
23 No. 1514 was marked for
24 identification.)

1 BY MS. GALE:

2 Q. And it start at Bates
3 No. MWG13-15_48711. What is this document?

4 A. This is the Quarterly Groundwater
5 Monitoring Report for Powerton Generating Station
6 dated April 24th, 2015.

7 Q. And did KPRG assist in preparing
8 this document?

9 A. Yes, we did.

10 Q. Can you turn to Table 3, which is
11 located at 13-15_48742?

12 A. Okay.

13 Q. And what is Table 3?

14 A. Table 3 is a summary of the
15 analytical data for the sampling of the East Yard
16 Runoff Basin, and nine rounds of sampling from
17 February 2013 through February 2015 on a quarterly
18 basis.

19 Q. And what did the -- excuse me.

20 What do the samples show?

21 A. The samples to us indicated that the
22 water in the East Yard Runoff Basin is, in fact,
23 stormwater runoff. It is not water that one would
24 encounter in an ash pond.

1 MS. GALE: Mr. Hearing Officer, we
2 move to admit Midwest Gen's Exhibit 1514.

3 HEARING OFFICER HALLORAN:
4 Ms. Bugel?

5 MS. BUGEL: No objection.

6 HEARING OFFICER HALLORAN: Thank
7 you.

8 Exhibit 1514 is admitted. No
9 objection.

10 (Whereupon, Respondent's Exhibit
11 No. 1514 was admitted into
12 evidence.)

13 BY MS. GALE:

14 Q. Mr. Gnat, we discussed your work for
15 Midwest Gen pursuant to the federal and state CCR
16 rules in May about Joliet 29.

17 Do you also do that work for
18 Midwest Gen at the Powerton Station?

19 A. Yes, we do.

20 Q. And so, generally speaking, for
21 the -- under the federal CCR program at Powerton,
22 what do you do?

23 A. We -- we collect the groundwater on
24 a quarterly basis, and those are for, again, as I

1 mentioned, for total inorganic, total metals as
2 specified in the rule, and so those are not field
3 filtered, whereas when we collect the CCA samples
4 from the same wells at the same time, for those
5 analyses we field filter them prior to placing
6 them into the acid preserved jars.

7 **Q. And under the federal program, you**
8 **collect that groundwater information. Do you also**
9 **prepare reports based upon that?**

10 A. Yes, we do.

11 **Q. And under the Illinois CCR program**
12 **at Powerton, generally speaking, what does KPRG**
13 **do?**

14 A. The same thing. The state rule is a
15 little different from the federal rule, in that
16 they don't recognize detection monitoring versus
17 assessment monitoring. The Illinois EPA just
18 requires the full -- what would be considered the
19 Appendix III, Appendix IV parameters of the
20 federal rule. They just consider that one -- one
21 list of analyses, and those are required on a
22 quarterly basis, plus turbidity, which is not
23 required under the federal rule.

24 **Q. And what kind of reports do you**

1 **prepare under the Illinois CCR rule?**

2 A. We prepare -- under the state CCR
3 rule, within 60 days of your last day of sampling,
4 you have to provide a summary of the data, and so
5 we refer to those as our 60-day reports, and so we
6 provide those, as well as then an annual
7 groundwater monitoring and corrective action
8 report as required under the rule.

9 **Q. And for the Powerton Station, did**
10 **KPRG prepare any permit applications?**

11 A. Yes, we did.

12 **Q. So what permit -- so what permit**
13 **applications did you prepare for Powerton Station?**

14 A. We prepared the operating permit for
15 the Ash Bypass Basin and Ash Surge Basin, the
16 initial application for the initial operating
17 permit for the Former Ash Basin, as well as now
18 under the state rule, the Metals Cleaning Basin is
19 also involved, and we prepared the operating
20 permit for that and construction permit for that
21 as well.

22 **Q. So for the operating permit**
23 **application for the Ash Surge Basin, Bypass Basin,**
24 **and Former Ash Basin, did you act as a**

1 **clearinghouse similar to your description of**
2 **Joliet 29?**

3 A. That is correct, yes.

4 MS. BUGEL: Objection, leading
5 questions.

6 HEARING OFFICER HALLORAN:
7 Sustained. Could you rephrase? Thank you.

8 BY MS. GALE:

9 Q. Sure. For the operating permit
10 applications for the Ash Surge Basin, Bypass
11 Basin, and Former Ash Basin, how did -- what was
12 KPRG's role?

13 A. KPRG's role was kind of like a hub
14 or a clearinghouse where we would -- for the
15 sections that other consultants were involved
16 with, for example, structural integrity and so on,
17 all of that would be -- being submitted through
18 us, and we would be bringing the whole application
19 together, and then there were sections of that
20 application that KPRG generated as well.

21 So we were somewhat as the
22 clearinghouse for it, and bringing the whole
23 permit together for submittal.

24 Q. And for the operating permit

1 **application for the Ash Surge Basin, Bypass Basin,**
2 **and Former Ash Basin, how big was the application?**

3 A. Again, those are -- each of those
4 applications are three-inch binders with hundreds
5 of pages, literally.

6 Q. And for KPRG alone, how --
7 approximately how many hours did KPRG spend
8 preparing the operating permit application for the
9 Ash Surge Basin, Bypass Basin, and Former Ash
10 Basin?

11 A. You know, certainly between the
12 applications there is some same or similar
13 material that goes in on historic background and
14 so on, but then each one has its own specific
15 items. So each permit application is literally
16 into the hundreds or upper hundreds of hours for
17 KPRG work alone.

18 Q. And then you mentioned the Metal
19 Cleaning Basin operating permit application.

20 Why did you treat that
21 differently?

22 A. The Metals Cleaning Basin was not
23 part of the federal rule, and so once it was
24 identified that that was going to be brought in

1 under the state rule requirements, we had to
2 install a couple of additional monitoring wells to
3 bring that up to -- to bring the monitoring system
4 up to the state rule requirements.

5 And with the installation of
6 those wells, we basically had to start our
7 background groundwater sampling from scratch,
8 because for the other wells, we have already had
9 some sampling under the federal rule. So, you
10 know, when the state rule kicked in, we already
11 had -- for a lot of the wells for the other
12 basins, we had eight rounds of background, and so
13 on. For the Metals Cleaning Basin, we had to
14 start from scratch on that.

15 **Q. And what was -- and was that in**
16 **addition to your role -- well, let me put it this**
17 **way.**

18 **What was your role in preparing**
19 **the operating permit application for the Metal**
20 **Cleaning Basin?**

21 A. Well, it was just -- well, from the
22 get-go was to install the additional monitoring
23 wells and do the eight rounds of background
24 sampling, calculation of all the statistics

1 associated with that, and then the same role as we
2 played for the other ones where we were somewhat
3 the hub and clearinghouse for all the other
4 information that's being prepared by other
5 specialty consultants to feed into that one permit
6 application and then pulling the whole application
7 together.

8 **Q. And then to prepare the Metal**
9 **Cleaning Basin operating permit application,**
10 **approximately how many hours just for KPRG to**
11 **prepare the application, including installing the**
12 **new wells and the eight rounds of sampling?**

13 A. Right. Once -- once you start
14 adding that in, certainly into the upper hundreds
15 of hours, if not even tipping a thousand.

16 **Q. Did KPRG assist in preparing a**
17 **construction permit application at the Powerton**
18 **Station?**

19 A. Yes, we did.

20 **Q. Which one?**

21 A. The construction permit application
22 for the Ash Bypass Basin and Ash Surge Basin, and
23 the construction application for the Former Ash
24 Basin, as well as then the separate one for the

1 Metals Cleaning Basin, each one of those three
2 sets is an individual submittal.

3 Q. And what was KPRG's role in
4 preparing those permit applications?

5 A. The same, as kind of a hub and
6 central clearinghouse on it.

7 Q. And for the construction permit
8 applications for the Powerton basins,
9 approximately how big -- pages. How many pages
10 was each application?

11 A. Hundreds of pages.

12 Q. And again, approximately how many
13 hours did KPRG spend preparing those applications?

14 A. Hundreds of hours.

15 Q. Mr. Gnat, have you visited the
16 Powerton Station?

17 A. Yes, I have.

18 Q. And have you observed the Service
19 Water Basin?

20 A. Yes, I have.

21 Q. Okay. I want you to turn to the
22 next tab in your book, Exhibit -- Gnat Book G.
23 This is an excerpt of Exhibit 710 that was
24 previously admitted in the first hearing. It's

1 these sheets, and it starts at MWG13-15_34260.

2 A. Yes.

3 Q. Okay. Mr. Gnat -- and I actually
4 want you to turn to Sheet No. C021, which is hard
5 to read, and I actually have the larger size here
6 if you need it, but that's on Bates
7 No. MWG13-15_34265.

8 A. Yes.

9 Q. What is depicted in Sheet No. C021?

10 A. This is -- it looks like the
11 construction drawings by Natural Resources
12 Technologies, which was the consulting firm that
13 did this work and the design work, and this in
14 particular is a set of east/west and north/south
15 cross sections through the -- designed cross
16 sections through the Ash Surge -- I'm sorry --
17 through the Service Water Basin.

18 Q. And I'm sorry. Just -- did you say
19 it shows the elevations as well?

20 A. Yes, it does.

21 Q. Okay. And the elevations in these
22 cross sections, what did -- what does that mean?

23 A. The elevations are relative to mean
24 sea level. So those are surveyed by an Illinois

1 licensed surveyor, and it's all surveyed towards a
2 benchmark that's established on the property
3 that's, I believe, relative to -- it's called
4 NGVD; so National Geodetic Vertical Datum, I
5 believe.

6 Q. So looking at Sheet No. C021, what
7 is the elevation of the base of the interior of
8 the Service Water Basin?

9 A. It looks like approximately 440,
10 441 -- 441 elevation relative to mean sea level.

11 Q. And at this -- looking at the same
12 sheet, approximately what is the elevation of the
13 top of the Service Water Basin?

14 A. The top ranges anywhere from about
15 459 to -- about 459 to 460 feet above mean sea
16 level.

17 Q. And we are going to put on the
18 screen the Board's 2019 opinion, page 39. On page
19 39, I believe, last paragraph, the Board states,
20 "In addition, Midwest Gen employees recalled ash
21 ponds and historical ash flooded on several
22 occasions with water rising 30 feet above the
23 bottom of the Secondary Ash Settling Basin and
24 Illinois River flowing in and out of the Former

1 Ash Basin."

2 Now, first of all, Mr. Gnat,
3 is -- to your knowledge, what is the Secondary Ash
4 Settling Basin?

5 A. I believe that's the same as the
6 Service Water Basin.

7 Q. And so knowing that the base of the
8 Service Water Basin is at 441, how high would the
9 river have to be to be 30 feet above the base of
10 the Service Water Basin?

11 MS. BUGEL: Hearing Officer, I'm
12 going to object here to this is beyond the scope
13 of our -- our case that we put on.

14 HEARING OFFICER HALLORAN: You are
15 going to have to speak up, Ms. Bugel.

16 MS. BUGEL: I'm sorry. I'm going to
17 have to object to this being beyond the scope of
18 Complainants' case. We did not get into flooding.

19 MS. GALE: This is --

20 HEARING OFFICER HALLORAN: We did
21 not get into what?

22 MS. BUGEL: Flooding.

23 HEARING OFFICER HALLORAN: Ms. Gale?

24 MS. GALE: Well, this is Midwest

1 Generation's direct. So I -- I don't understand
2 the objection.

3 MS. BUGEL: Their case in -- needs
4 to be in response to our case. It can't go beyond
5 the scope of our case.

6 HEARING OFFICER HALLORAN: I will
7 let it in. You know, the Board can disregard if
8 they so choose, and, you know, I'm not sure where
9 it belongs, but you may proceed, Ms. Gale.

10 Overruled.

11 BY MS. GALE:

12 Q. I'm sorry, Mr. Gnat. I didn't hear
13 the answer to your last question.

14 So, knowing that the base of the
15 Service Water Basin is at 441, how high would the
16 river have to be to be 30 feet above the base of
17 the Service Water Basin?

18 A. Four hundred seventy-one feet.

19 Q. Mr. Gnat, are you familiar with
20 river gauges in the Illinois River?

21 A. Yes, I am.

22 Q. And what are river gauges?

23 A. There are gauges in various parts of
24 the US river system that are set up by the US

1 Geologic Survey, and they are for the purpose of
2 recording what the stage of the river is at a
3 particular time.

4 Q. I'll read 2022 Stipulation No. 10,
5 "The NOAA National Weather Service river gauge
6 located at the Peoria Lock and Dam is the closest
7 river gauge upstream of the Powerton Station."

8 (Whereupon, Respondent's Exhibit
9 No. 1515 was marked for
10 identification.)

11 BY MS. GALE:

12 Q. Mr. Gnat, I would like you to turn
13 to the next tab in your book --

14 A. Okay.

15 Q. -- which has been marked for
16 identification purposes as 15 -- Midwest Gen
17 Exhibit 1515, Bates No. MWG13-15_124544.

18 Mr. Gnat, what is Exhibit 1515?

19 A. This is the gauging data from the
20 Illinois River at the Peoria Lock and Dam, which
21 is the nearest upstream gauging station
22 established.

23 Q. And looking at the bottom of that
24 page, do you see it says historical crests?

1 A. Yes.

2 Q. What is the highest crest that was
3 recorded at the Peoria Lock and Dam?

4 A. That was 456.57 feet on April 24th
5 of 2013.

6 Q. Okay. And, Mr. Gnat, I would like
7 you to turn to the next tab. It reads
8 stipulation -- excuse me. 2022, Stipulation
9 No. 11, "The NOAA National Weather Service river
10 gauge located at the Kingston Mines is the closest
11 river gauge downstream of the Powerton Station."

12 And the next exhibit, Midwest
13 Gen Exhibit marked for identification as 1516,
14 labeled as MWG13-15_124541.

15 Mr. Gnat, what is Midwest Gen
16 Exhibit 1516?

17 (Whereupon, Respondent's Exhibit
18 No. 1516 was marked for
19 identification.)

20 MS. BUGEL: Hearing Officer, I am
21 going to object to this line of questions about
22 both 1515 and 1516, as these are printouts from
23 NOAA. Mr. Gnat has not been established as having
24 first-hand knowledge of these printouts. He

1 cannot authenticate them. He has not
2 authenticated them. He can't establish the -- you
3 know, the foundation for these exhibits.

4 HEARING OFFICER HALLORAN: Ms. Gale?

5 MS. GALE: We can go through some
6 questions, sure.

7 HEARING OFFICER HALLORAN: That's
8 fine. Yes.

9 BY MS. GALE:

10 Q. Mr. Gnat, can you flip back to
11 Midwest Gen Exhibit 1515, please?

12 A. Yes.

13 Q. And I believe you stated earlier
14 when I asked you if you knew what river gauges
15 were, you said -- well, remind us when you said
16 you knew what river gauges were.

17 What are they?

18 A. River gauges are established by the
19 US Geologic Survey at various points on rivers to
20 record and document the elevation of the river at
21 that location, and they call it river stage.

22 Q. And how do you know what river
23 gauges are?

24 A. That's a common practice that's

1 established across the country by the USGS. It's
2 used in flood -- you know, understanding flood
3 control and so on. It's just a very common --
4 commonplace information and setups across the
5 entire United States.

6 **Q. And as a hydrogeologist, have you**
7 **consulted the NOAA river gauges?**

8 A. Sure.

9 **Q. For what?**

10 A. For the purposes of evaluating flood
11 stages, and certainly for -- as part of the
12 construction permit application, we had to do some
13 basic groundwater -- numerical groundwater
14 modeling in support of the construction permit
15 applications, and getting an understanding of
16 river -- river stages in the area adjacent or --
17 you know, adjacent to the plant. This is
18 information that -- that is needed and we -- it
19 was pulled for those purposes, certainly.

20 **Q. And where did you go to find that**
21 **information?**

22 A. You go online.

23 **Q. Which website?**

24 A. You can go to the NOAA website.

1 There is -- also you can go right -- access
2 probably the same website. You can do it through
3 the USGS as well.

4 Q. And looking at Exhibit 1515 -- well,
5 does this look like something you would consult?

6 A. Yes. This is a typical printout.

7 Q. Okay. And same thing with
8 Exhibit 1516. What does this look like?

9 A. The same -- the same printout,
10 except for the next river gauge downstream, and so
11 this is for Kingston Mines, which is the first
12 river gauge downstream of the plant. So when we
13 were doing our modeling, we certainly would look
14 at the river stage at the nearest gauging station
15 upstream of our facility, and at the river gauge
16 at the nearest station downstream of our facility.

17 Q. And so when you did the modeling,
18 were these the two stations you -- river gauges
19 you looked at?

20 A. Yes.

21 Q. All right. Looking at Exhibit 1516,
22 which is the Kingston Mines river gauge, and
23 looking at the bottom, left corner under historic
24 crests, what is the highest the Kingston Mine dam

1 **has ever been at?**

2 A. The historic crest on this printout
3 here is 26.54 feet on April 24th, 2013.

4 Now, that is the measurement on
5 the gauge itself. So in this particular case, a
6 little bit further up, it provides what the gauge
7 datum is, which is 428 feet. So this -- the way
8 you would interpret this is it would be 26.54 feet
9 higher than 428 feet. So that would be 440 --
10 454 feet, plus or minus. Something around that
11 order.

12 **Q. Does 454.5 feet sound about right?**

13 A. Correct.

14 MS. BUGEL: Objection, leading.

15 HEARING OFFICER HALLORAN:

16 Sustained. You can rephrase.

17 BY MS. GALE:

18 **Q. Do you want to try that math again,**
19 **how many feet?**

20 A. If I had a pencil or a --

21 HEARING OFFICER HALLORAN: Oh, here.

22 BY THE WITNESS:

23 A. Can I write on this exhibit?
24

1 BY MS. GALE:

2 Q. By all means.

3 A. 454.54 feet.

4 Q. Thank you.

5 So based upon the record highs
6 at both the Peoria Lock and Dam and the Kingston
7 Mines, has the Illinois River ever reached
8 471 feet?

9 A. No, it has not.

10 MS. BUGEL: Objection. That was
11 asking about facts that have not been established.

12 MS. GALE: All right. Mr. Hearing
13 Officer, he said at the beginning that the -- you
14 know, the base -- the base liner was at -- well, I
15 have it written down.

16 MS. BUGEL: But my objection to the
17 question is use of the word "ever," which is not
18 established by this exhibit. This exhibit only
19 goes back to 2020.

20 HEARING OFFICER HALLORAN: Do you
21 want to rephrase, Ms. Gale?

22 BY MS. GALE:

23 Q. Sure.

24 Mr. Gnat, under the Exhibit 1515

1 **and 1516, what does historic crests mean to you?**

2 A. These are the highest levels reached
3 at that location over the period of recording, and
4 so if -- I get -- if we would go back to
5 Exhibit 1515, the spread of data here is from 1943
6 to 2000 -- 2019. And for Exhibit 1516, the spread
7 of data is from 1943 to -- also to 2015. Well,
8 actually, the data goes up to 2022. It provides
9 the recent crests.

10 Q. Okay. So based upon this
11 document -- and you said, I think, the earliest
12 was 1943, but does historic crests identify --
13 these are the -- well, the -- when you say
14 historic crests, is that all of the crests, or
15 what does that mean to you?

16 A. Right. So when I look at this --
17 and let's say for Exhibit 1516 where it says
18 historic crests, and it provides the first five of
19 them, the way I would interpret that is these were
20 the five highest elevations that the river reached
21 over the period of recording at that station.

22 Q. Okay. So based upon the record of
23 historic crests over the period of recording at
24 both the Peoria Lock and Dam and the Kingston

1 **Mine, did the river reach 471 feet?**

2 MS. BUGEL: Objection, leading.

3 HEARING OFFICER HALLORAN:

4 Overruled. He may answer, if he is able.

5 BY THE WITNESS:

6 A. No.

7 BY MS. GALE:

8 Q. So focusing on the 30 feet above the
9 bottom of the Secondary Ash Basin, is that
10 accurate?

11 A. No, that's not accurate.

12 Q. And do you have personal experience
13 with that, on how high the historic crests have
14 been?

15 A. Well, between myself and all of the
16 crews that were out there, we never saw water that
17 would suggest that the Service Water Basin was
18 under water, which at 475 -- 471 feet of
19 elevation, it would be under water.

20 MS. GALE: Thank you. Mr. Hearing
21 Officer, Midwest Generation moves for the
22 admission of Exhibits 1515 and 1516.

23 HEARING OFFICER HALLORAN:

24 Ms. Bugel?

1 MS. BUGEL: We maintain our
2 objection to the witness' inability to lay the --
3 confirm the authenticity of these exhibits.

4 HEARING OFFICER HALLORAN: Okay. I
5 think authenticity is a low bar, and I think he
6 laid a very well foundation. So objection
7 overruled. 1515, 1516, they are admitted.

8 (Whereupon, Respondent's Exhibit
9 Nos. 1515 and 1516 were
10 admitted into evidence.)

11 BY MS. GALE:

12 Q. Mr. Gnat, I would like you to flip
13 back to the maps of the Powerton Station where
14 there were excerpts of Exhibit 1307.

15 A. Okay.

16 Q. Can you see the area -- do you see
17 the Illinois River on the top of that map?

18 A. Yes, I do.

19 Q. And there are -- I always want to
20 say two long, rectangular channels from the river.

21 Do you see those?

22 A. Yes.

23 Q. What are those?

24 A. I believe those are intake channels

1 that were dredged in.

2 **Q. And do you see the area between**
3 **those channels?**

4 A. Yes. Between those two channels,
5 yes.

6 **Q. And to your knowledge, has KPRG ever**
7 **taken any samples from that area?**

8 A. I have not, but KPRG has, yes.

9 **Q. And what samples -- what did KPRG**
10 **sample?**

11 A. Midwest Generation requested us to
12 sample the dredge spoils. Those are dredge spoils
13 in that area from the dredging of the -- dredging
14 or maintenance, but those are dredge spoils that
15 are placed in that area.

16 **Q. Okay. And what are dredging -- I**
17 **think you said -- can you just explain what**
18 **dredging spoils are?**

19 A. That's when you go in and you
20 excavate and dredge out for these channels to
21 bring in water from the Illinois River. Those
22 would have to be excavated and dredged out, and
23 it's -- and if they start silting in, you maintain
24 them and dredge them out some more, but basically,

1 the spoils from the excavation of those was placed
2 onto that area in the middle, and we were
3 requested to sample that, and the term used for
4 that is "dredge spoils."

5 Q. Thank you. All right. Let's just
6 make sure.

7 Mr. Gnat, I would like you to
8 flip to the one, two, three -- six -- fifth tab in
9 your book, and it's a map, and it's an excerpt of
10 Exhibit 1310.

11 A. Yes.

12 Q. What is depicted in this map?

13 A. This is the groundwater contour map
14 for November 2021 for the Waukegan station.

15 Q. Have you visited the Waukegan
16 station?

17 A. Yes, I have.

18 Q. How would you describe the area the
19 Waukegan station is located in?

20 A. That's an old and heavily industrial
21 area. To the north, the Mans-Johnsville [sic]
22 Superfund site. To the west was an old tannery,
23 and the general boiler site. Immediately south is
24 the wastewater treatment plant, still operational,

1 and then south of that are -- there is an old coal
2 gas site. I believe that that might have been a
3 Superfund site. But I know that the old -- the
4 Outboard Marine site just south of here as well
5 was an old Superfund site.

6 **Q. And on this figure -- I think you**
7 **said it's a map of Waukegan station.**

8 **What is depicted in the map of**
9 **the Waukegan station?**

10 A. This map shows the entire station.
11 In particular for this map, though, we were --
12 this is a map for the groundwater flow that goes
13 beneath the West Pond and the East Pond, which is
14 kind of in the bottom, central half of the figure.

15 **Q. And what's the groundwater flow?**

16 A. Groundwater flow beneath the ponds
17 is in an east/southeasterly direction.

18 **Q. Okay. And so similar to our**
19 **discussions about Joliet 29 and the Powerton**
20 **Station, in 2010 what was the groundwater sampled**
21 **for?**

22 A. In 2010, that was part of that
23 initial voluntary sampling that was done for the
24 list of parameters that were provided by the

1 Illinois EPA, and those were for dissolved
2 organics -- inorganics.

3 **Q. And then in 2015 at Waukegan, what**
4 **kind of groundwater sampling was starting to be**
5 **conducted?**

6 A. In 2015, the federal CCR rule was
7 coming into play, and we started the federal CCR
8 sampling under that program. That was for total
9 metals. I believe also at that time to -- in
10 response to some of the requirements under the
11 federal rule, there was -- had to be an adjustment
12 of the east berm of the East Pond, and for that,
13 Midwest Generation obtained a construction permit
14 from Illinois EPA.

15 And under the -- under the
16 requirements of that permit, that also specified
17 total metals, and at that time, Illinois EPA just
18 asked us rather than under -- doing sampling under
19 CCA, that we can stop the dissolved metals and
20 just fulfill the requirements of the construction
21 permit itself for that, and those were total
22 metals, a slightly different list than the federal
23 rule, but from that point forward, we were not
24 doing any type of field filtering for groundwater

1 samples at Waukegan station.

2 Q. So looking at the figure, do you see
3 the area east of the East Pond?

4 A. Yes.

5 Q. And on your visits to the station,
6 have you viewed that area east of the East Pond?

7 A. Yes, I have.

8 Q. And what are you seeing you -- when
9 you have observed that area?

10 A. Well, from -- going to the east it's
11 a fairly steep slope going down. There has never
12 been any indication of seeps or anything like that
13 of -- visible along that slope, and then that goes
14 into kind of a marshy area down at the base.

15 Q. And in May I believe you testified
16 about data from the ELUC wells at the Waukegan
17 station. Do you recall that testimony?

18 A. Yes.

19 Q. What are the ELUC wells?

20 A. The environmental land use control
21 wells were for the site investigation that was
22 being done on the tannery to the west of the -- of
23 the plant. That was being done under, I believe,
24 the Illinois EPA site remediation program, the

1 SRP, and they documented groundwater contamination
2 with inorganics moving to the east and onto our
3 property.

4 And as part of the risk-based
5 closure that's allowed under the site remediation
6 program, they requested that Midwest Generation
7 would allow for an environmental land use control,
8 or ELUC, to be placed on the property associated
9 with their contamination coming onto Midwest
10 Generation property, and Midwest Generation agreed
11 to it, and Wells -- I believe -- 10, 11, 12 and
12 14 -- 14 and 15, and actually, there was a well
13 13, but it's no longer in use, but those are all
14 the wells that were installed by the consultant
15 working for the tannery as part of the ELUC.

16 **Q. And what is the purpose of an ELUC?**

17 A. It's -- the purpose is it's placed
18 right on the deed of the property, and it
19 restricts the -- in this particular case, it
20 restricts the use of groundwater within that area.
21 So no groundwater wells, potable water wells, can
22 be installed on that area of the property.

23 **Q. As part of the compliance commitment**
24 **agreement for the Waukegan station, what did you**

1 **assist in establishing at Waukegan?**

2 A. An expanded environmental land use
3 control.

4 **Q. And what do you mean by expanded?**

5 A. So, the initial ELUC that was placed
6 on the property for the tannery investigation so
7 that that investigation could get closure under
8 the SRP program, the -- that ended basically just
9 past the property line on the property, and the
10 rest of the ELUC basically -- an expanded ELUC
11 was -- was put in place that basically covers from
12 that location all the way to the east beneath the
13 ash ponds and south of the ash ponds all the way
14 to Lake Michigan.

15 **Q. So we have discussed your work for**
16 **Midwest Gen pursuant to the federal and state CCR**
17 **rules for Joliet 29 and Powerton Station. For the**
18 **Waukegan station, generally speaking, what is your**
19 **work -- do you conduct any work under the federal**
20 **CCR rules?**

21 A. Yes. We do the sampling under the
22 federal CCR rule, as well as under the state CCR
23 rule.

24 **Q. And for the sampling, what type of**

1 **reports do you prepare?**

2 A. Under the federal rule, there are
3 semi-annual and annual reporting requirements, and
4 under the state rule, the same. It's a quarterly
5 required sampling, and we submit what we call the
6 60-day reports, which are data summaries 60 days
7 after the last day of sampling in the field.

8 **Q. And any other reports for the**
9 **sampling?**

10 A. And then there is an annual
11 reporting requirement as well.

12 **Q. And then for the Waukegan station,**
13 **what permit applications did you prepare?**

14 A. The application for -- the initial
15 application for operating permit, as well as the
16 initial application for a construction permit.

17 **Q. And for the Waukegan operating**
18 **permit application, and is that -- was that --**
19 **well, what ponds was the operating permit**
20 **application for?**

21 A. The East Pond and the West Pond.

22 **Q. And for the operating permit**
23 **application for the east and west ponds, what was**
24 **KPRG's role?**

1 **preparing the construction permit application?**

2 A. The same. We developed some of the
3 sections, and other sections were developed by
4 other consulting firms with other expertise, and
5 we basically were a clearinghouse and pulled the
6 whole package together.

7 Q. And for the Waukegan construct --
8 excuse me.

9 For the Waukegan construction
10 permit application for both ponds, approximately
11 how big was the application?

12 A. Again, hundreds of pages.

13 Q. And approximately how many hours did
14 KPRG spend preparing the application?

15 A. Hundreds of hours.

16 Q. If you can turn to the next document
17 in your binder. This has been marked for
18 identification purposes as Exhibit 1517. It
19 starts on Bates No. MWG13-15_81195.

20 Mr. Gnat, what is Exhibit 1517?

21 (Whereupon, Respondent's Exhibit

22 No. 1517 was marked for

23 identification.)

24

1 BY THE WITNESS:

2 A. This is the analytical reporting
3 package from Eurofins, which is the lab that did
4 the analyses for the Waukegan station, and this in
5 particular is for three -- a subset of three
6 samples that were drawn for the LEAF test,
7 L-E-A-F, test, for the three ash samples that were
8 collected from that area west of the West Ash
9 Pond.

10 Q. So we discussed this in May -- well,
11 the area west of the West Ash Pond, remind us,
12 what did Midwest -- excuse me -- what did KPRG do
13 in that area?

14 A. We established a fairly large
15 boring. We were asked to do a sampling in that
16 area, detailed sampling, and to basically just
17 guarantee that that one round will take care of
18 everything. So we ended up doing 40 borings over
19 a 10-acre area, or 4 borings per acre, which
20 generally is a little bit -- could be overkill,
21 but we were asked to do it expeditiously. We did
22 a very thorough, detailed sampling of the ash, and
23 based -- and then I believe there were two to
24 three samples per boring analyzed for the ash

1 parameters as defined in the CCR rule, and based
2 on those results, we chose a subset of three
3 samples that we had the lab run for this LEAF
4 test.

5 **Q. And, Mr. Gnat, what is the LEAF**
6 **test?**

7 A. It's a leaching test that -- and I
8 believe it stands for leaching environmental
9 framework testing, and it's a leaching test that
10 has been established. In this particular case,
11 they take the sample, and they collect leachate
12 over a wide range of pH. I believe the pH ranges
13 from as low as 2, which is an extremely acidic
14 condition to as high as 13, which is an extremely
15 alkaline condition, and a whole slew in between of
16 different pH levels, including neutral.

17 Then they also run it at the
18 natural pH, which is the pH of the material when
19 they received it. And so they basically run a
20 liquid of a high pH or a low pH, depending on the
21 run they are doing. They collect the leachate at
22 the bottom, and then they run that for the full
23 list of parameters that are listed in the CCR
24 rule.

1 **Q. And then why -- what is -- why use**
2 **the LEAF test?**

3 A. The LEAF test has more recently come
4 into popular use and is looked at to get an
5 understanding of how materials might give up or
6 mobilize various constituents under the whole
7 range of pHs, and then knowing, you know, kind of
8 what the general pH range is for the particular
9 site that you are looking at, and so on, you can
10 get an idea of what might truly be mobile in the
11 system associated with that.

12 **Q. And so when you did this**
13 **investigation of the area of the west -- of the**
14 **West Pond, why did you choose the grid pan**
15 **pattern?**

16 A. That's a very robust approach to
17 sampling. So, I mean, you could certainly do lots
18 of different approaches, and normally, if we
19 weren't requested to just do everything and as
20 expeditiously as possible, we'd probably propose
21 doing a phased approach where we would go out and
22 do a set of five borings or so, you know, five or
23 six borings across the site, collect several
24 samples from each boring, and then take a look

1 statistically, how is the variability in that
2 data.

3 And if the variability is low,
4 then that set of samples is pretty representative
5 of the ash in that whole mass. If the variability
6 is high, you would have to go back and collect
7 additional samples to get a representative sample.
8 So, I mean, statistically, if you look at
9 something, if it's purely homogenous, you can pull
10 one sample out of 100,000 cubic yards and that
11 sample is representative, because it's pure
12 homogenous.

13 So, generally an approach is if
14 we are asked if there is no, you know, desire for
15 expeditious purposes or whatever, you know, we
16 would look at doing a phased approach. Let's do a
17 handful of borings across that area, get a good
18 idea horizontally and vertically through that
19 area, take a look statistically, what's the
20 variability, and do we need to collect more
21 samples to be representative, or does the set we
22 have represent that mass fairly well
23 statistically?

24 MS. GALE: Mr. Hearing Officer,

1 Midwest Gen moves for the admission of 1517.

2 HEARING OFFICER HALLORAN:

3 Ms. Bugel?

4 MS. BUGEL: No objection.

5 HEARING OFFICER HALLORAN: Thank
6 you, Ms. Bugel.

7 Exhibit 1517 is admitted.

8 (Whereupon, Respondent's Exhibit
9 No. 1517 was admitted into
10 evidence.)

11 BY MS. GALE:

12 Q. Mr. Gnat, I would like to move on to
13 the Will County Station. Will you flip to the
14 last tab in your binder?

15 A. Yes.

16 Q. And a map, which is an excerpt of
17 Exhibit 1314, what does this map show?

18 A. This is the groundwater contour map
19 for the Will County Station ash ponds for
20 November 2021.

21 Q. And have you been to the Will County
22 Station?

23 A. Yes, I have.

24 Q. How would you describe the area that

1 **the Will County Station is located?**

2 A. The Will County Station is
3 somewhat -- kind of an isolated piece of property
4 with the Des Plaines River to the west, the
5 Chicago Sanitary Ship Canal to the east. I
6 believe there is a materials quarry to the south,
7 and then on the other side of the river and
8 further north, those areas are some undeveloped,
9 some residential, some commercial.

10 **Q. And looking at the map, what is the**
11 **direction of the groundwater flow?**

12 A. Groundwater flow beneath the ponds
13 is to the west.

14 **Q. Thank you. So similar to the prior**
15 **stations, in 2010, what was the groundwater**
16 **sampled for?**

17 A. You know, the same under that
18 voluntary agreement. The Illinois EPA had a list
19 of parameters that they wanted analyzed on a
20 quarterly basis. They're inorganics, and they
21 were for dissolved metals.

22 **Q. And then in 2015 at Will County**
23 **related to the groundwater, what happened?**

24 A. That's when a federal rule was

1 applied and Ponds 2 South and 3 South were
2 considered to be -- to fall under the jurisdiction
3 of the federal rule, and so we installed Wells 11
4 and 12 to bring the monitoring system that would
5 be in compliance then for the federal rule for --
6 that combined two ash ponds together, and then we
7 did groundwater monitoring on -- first we
8 established the background under the federal rule
9 and groundwater monitoring using a total metals
10 analysis.

11 **Q. Okay. And then in 2021, what**
12 **happened related to groundwater?**

13 A. The state rule came into effect, and
14 Ponds 1 North and 1 South were included under the
15 jurisdiction of the state rule, and so in order
16 for us to, again, meet the monitoring requirements
17 under the state rule, we installed Wells 13, 14,
18 and 15, downgradient of Ponds 1 North and 1 South
19 to make sure that we fulfilled the requirements of
20 the state rule as well for groundwater monitoring.

21 **Q. And for the Will County Station,**
22 **were you -- did you assist in responding to the**
23 **requirements under the compliance commitment**
24 **agreement?**

1 A. Yes, we did.

2 Q. **What did KPRG assist in preparing?**

3 A. We assisted in preparing the --
4 there is an environmental land use control that's
5 on the property, and I also believe that there is
6 a groundwater management zone that has been
7 established on that property as well.

8 Q. **And, to your knowledge, is the**
9 **groundwater management zone still in effect?**

10 A. Yes, that's my understanding.

11 Q. **And similar question. Is the ELUC**
12 **still in effect?**

13 A. Yes, it's on the deed.

14 Q. **And looking at the west side of the**
15 **ponds, have you observed that area before?**

16 A. Yes.

17 Q. **What is over there?**

18 A. Well, again, it drops off fairly
19 steeply from the ash ponds, and, in fact, when we
20 were installing Wells 13, 14, and 15, we actually
21 had to build out some pads a little bit to be able
22 to place these wells, and so there is, you know,
23 somewhat of -- you'd call it an embankment. So
24 that's there, and then there is also a utility

1 corridor above ground, high power lines, that run
2 just to the west of where we have our wells,
3 within that area, and then you have got the river.

4 Q. And so when you have looked over
5 there, what have you observed?

6 A. You know, it's a fairly
7 well-vegetated slope there. Did not see any seeps
8 or evidence of seeps, whatsoever.

9 Q. So, Mr. Gnat, we have discussed your
10 work for Midwest Gen pursuant to federal CCR rules
11 related to the other three stations. At Will
12 County Station, what is KPRG doing pursuant -- for
13 Midwest Gen pursuant to the federal CCR rule?

14 A. For the federal rule, we are doing
15 the groundwater monitoring under the federal rule
16 and the associated reporting under the rule.

17 Q. And for the -- are you also doing
18 work for the -- under -- for Midwest Gen under the
19 Illinois CCR rule?

20 A. Yes, we are.

21 Q. What is KPRG -- excuse me.

22 What is KPRG doing under the
23 Illinois CCR rule?

24 A. Again, we installed the additional

1 monitoring wells required for the reporting for
2 the groundwater monitoring. We do the quarterly
3 groundwater monitoring for the impoundments, and
4 we also did the initial permits for application --
5 initial application for operating permits -- I'm
6 sorry -- for the ponds, as well as the
7 construction permit applications for the ponds.

8 **Q. So, the initial operating permit**
9 **application that you mentioned, what operating**
10 **permit application did you prepare -- or excuse**
11 **me -- have a role in?**

12 A. There is an initial application for
13 an operating permit for Ponds 2 South and 3 South,
14 and then there is a separate one for Ponds 1 North
15 and 1 South.

16 **Q. And for the Ponds 2 South and 3**
17 **South operating permit application, what was**
18 **KPRG's role?**

19 A. The same as on the previous ones,
20 kind of a hub and clearinghouse for information
21 coming in from other consultants. We also wrote
22 some of the sections, and we pulled the entire
23 application package together.

24 **Q. And the operating permit application**

1 for Ponds 2 South and 3 South, approximately how
2 big was it?

3 A. Again, hundreds of pages, three-inch
4 binder.

5 Q. And approximately how many hours --
6 or excuse me.

7 How many hours just for KPRG did
8 it take to prepare that application?

9 A. Hundreds of hours.

10 Q. And then you mentioned that there
11 was a separate operating permit application for
12 Ponds 1N and 1S?

13 A. Correct.

14 Q. Why was that separate?

15 A. We had to install the three
16 additional monitoring wells, and with that, again,
17 kind of similar to what the Metals Cleaning Basin
18 was on the Powerton site, you know, since this
19 wasn't under the federal rule, we did not have the
20 benefit of all of the background federal rule
21 sampling that was done.

22 And so the establishment of the
23 statistical background, the required minimum of
24 eight rounds of sampling and so on, none of that

1 was available for the Ponds 1 North and 1 South.
2 So all of that had to be done, and so that was
3 being run as a separate application, a permit
4 application.

5 **Q. And what was KPRG's role in**
6 **preparing the permit application?**

7 A. The same. You know, we installed
8 all the wells. We did all the initial background
9 sampling, and then acted as the hub and
10 clearinghouse for the -- you know, the information
11 from other specialty consultants coming in and as
12 well as writing some of the sections ourselves and
13 pulling together the entire permit application.

14 **Q. And for the operating permit**
15 **application for Ponds 1N and 1S, how big was that**
16 **application?**

17 A. Hundreds of pages.

18 **Q. And to prepare that -- excuse me --**
19 **yeah.**

20 **To collect that application,**
21 **including installing the wells and collecting the**
22 **additional data, approximately how many hours of**
23 **KPRG's time was spent?**

24 A. Well into the hundreds, if not even

1 tipping a thousand hours with all the well
2 installations and having to go back and do eight
3 rounds of upfront monitoring and so on.

4 **Q. And you mentioned the construction**
5 **permit applications for Ponds 1N, 1S, 2S, and 3S,**
6 **right?**

7 A. Yes.

8 **Q. What is the status of those**
9 **construction permit applications?**

10 A. Those are in the process of being
11 prepared for final submittal. There was a public
12 meeting held last week in regards to those, and so
13 now there is a timeframe after the public meeting.
14 And so those applications are in the process of
15 being completed and finalized.

16 **Q. And what is KPRG's role in preparing**
17 **the construction permit applications?**

18 A. The same. Acting as a hub and
19 clearinghouse for data and aspects coming in from
20 other consultants, as well as preparing some of
21 the pages ourselves or sections ourselves, and
22 also attending the public meeting.

23 **Q. And understanding that they are not**
24 **final yet, approximately how big is the**

1 **applications?**

2 A. They will be hundreds of pages,
3 three-inch binder type.

4 Q. And so far, approximately how many
5 hours has KPRG spent in preparing the construction
6 permit applications for the four ponds?

7 A. Easily into the upper hundreds of
8 hours.

9 MS. GALE: Mr. Hearing Officer, can
10 I have five minutes?

11 HEARING OFFICER HALLORAN: Yes. Off
12 the record for five minutes.

13 (Whereupon, a discussion was had
14 off the record.)

15 HEARING OFFICER HALLORAN: We are
16 back on the record.

17 Ms. Bugel, do you want to take a
18 break before you start your cross or --

19 MS. BUGEL: Yes.

20 HEARING OFFICER HALLORAN: Okay.
21 Ten minutes. Off the record. Thank you.

22 (Whereupon, a short break was
23 taken.)

24 HEARING OFFICER HALLORAN: All

1 right. We are back on the record, Kari.

2 You know, I was -- again, I
3 forgot to announce we have Vanessa Horton, the
4 staff attorney, today from the Board. We also
5 have environmental scientist Essence Brown in the
6 back. Thanks for being here.

7 You may proceed, Ms. Bugel.

8 C R O S S E X A M I N A T I O N

9 by Ms. Bugel

10 Q. Okay. And, Mr. Gnat, I believe you
11 still -- do you have your binders in front of you
12 with all your exhibits from both May and today?

13 A. I believe so, yes.

14 Q. Okay. Can you please turn to
15 Exhibit 1502?

16 A. Which binder would that be?

17 Q. I think that's Book 2.

18 A. Yes.

19 Q. And this -- just to refresh
20 everybody's recollection, this Exhibit 1502
21 contains an alternate source demonstration?

22 A. Yes, it does.

23 Q. And that's found at Appendix B?

24 A. Correct.

1 Q. Can you please turn to Appendix B?

2 A. Okay.

3 Q. And looking at Appendix B, to the
4 best of your knowledge, has USEPA ever reviewed
5 this alternate source determination?

6 A. I do not know.

7 Q. To the best of your knowledge, has
8 Illinois EPA ever reviewed this alternate source
9 determination?

10 A. I do not know.

11 Q. And -- I'm sorry -- I said
12 determination, when I -- it's demonstration.

13 Has anybody at Illinois EPA ever
14 communicated to you that they reviewed this
15 alternate source demonstration?

16 A. No.

17 Q. Do you know if anyone other than
18 KPRG and Midwest Gen have ever reviewed this
19 alternate source demonstration?

20 A. I do not know.

21 Q. And this references an
22 alternate transient -- transient source, correct?

23 A. Correct.

24 Q. And just for the record, the

1 alternate source demonstration we are looking at
2 appears at 114021, the Bates No. 114021, correct?

3 A. Correct.

4 Q. And you didn't evaluate what the
5 alternate transient source was, correct?

6 A. That is correct.

7 Q. And in your testimony when you
8 referenced the alternate transient source, did you
9 reference the possibility that it was road salt?

10 A. I would have to go through here and
11 read this, but --

12 Q. And -- I'm sorry -- just to make my
13 question clear for the record, I was not referring
14 to the alternate source demonstration. I was
15 referring to your testimony back in May.

16 A. Oh, I believe that there -- in
17 previous testimony and discussions and even the
18 previous -- prior to May hearings and so on, I
19 believe that there was discussion of the use of
20 road salt associated with Channahon Road, and my
21 understanding is that from some of the previous
22 testimony and so on, that that was somewhat agreed
23 upon as well by the Illinois Pollution Control
24 Board.

1 **Q. And did you do any leach testing to**
2 **determine whether the constituents you were seeing**
3 **in the alternate source demonstration were caused**
4 **by road salt?**

5 A. I do not believe that for this
6 alternate source demonstration we did any LEAF
7 testing, which we did for other -- other stations.

8 **Q. And your answer referenced LEAF**
9 **testing. LEAF testing is one -- is a leach test,**
10 **correct?**

11 A. Correct. It's a specific type, yes.

12 **Q. Did you do any leach testing in**
13 **general to determine whether the constituents**
14 **referenced in this alternate source demonstration**
15 **were caused by road salt?**

16 A. Now, I -- we did not, and I -- one
17 of the things is by 2021 when this demonstration
18 was done, all of the ash has been removed at this
19 point. So I believe the ash was fully removed out
20 of that impoundment from, I believe, in 2019 or
21 so. So there is no ash in which we could even
22 sample at that point.

23 **Q. There is no ash in the ponds,**
24 **correct?**

1 A. And that -- this is for Pond 2.
2 There is no ash in Pond 2. There is still -- the
3 warning layer is still down in there, but all of
4 the ash has been removed.

5 **Q. And are there still Poz-O-Pac layers**
6 **in the three ponds at Joliet?**

7 A. I believe so.

8 **Q. And do the berms remain at the three**
9 **ponds at Joliet?**

10 A. Yes, they do.

11 **Q. And did you do any evaluation to**
12 **confirm whether the source, the transient source,**
13 **was offsite?**

14 A. We -- considering it was -- we were
15 seeing it in our upgradient well, as well as our
16 downgradient wells, that tends to indicate a
17 source upgradient to the ponds, and the ponds are
18 immediately upgradient -- or immediately adjacent
19 to the road, but that was -- under the federal
20 rule, there is no specific requirement to identify
21 the specific source.

22 **Q. And I would like to turn to**
23 **Exhibit 1504.**

24 A. Yes.

1 Q. And Exhibit 1504 consists of boring
2 logs, correct?

3 A. Correct.

4 Q. Are any of these boring logs marked
5 "draft"?

6 A. Yes. All of them are.

7 Q. And the -- looking at the very first
8 boring on Bates page 79341 --

9 A. Yes.

10 Q. -- this boring stops at 17 feet,
11 correct?

12 A. Correct.

13 Q. Okay. Do you know why this stops at
14 17 feet?

15 A. I believe that's where refusal was
16 encountered by the Geoprobe, which was the
17 drilling method that was being used. It's
18 generally on top of bedrock.

19 Q. Does -- is there anything on here
20 that indicates that bedrock was encountered?

21 A. Not on this specific boring, no.

22 Q. Is there anything on this specific
23 boring that indicates that refusal was -- refusal
24 was -- I don't know the right word -- encountered

1 or established?

2 A. No.

3 Q. And flipping through this series of
4 borings, can you tell me, is there any indication
5 on any of them that the boring hit bedrock?

6 A. No, not on these borings.

7 Q. And is there any indication on any
8 of these that there was refusal when the borings
9 stopped?

10 A. No. Not specifically on these
11 borings, no.

12 Q. And can you please turn to
13 Exhibit 1511?

14 A. Okay.

15 Q. And you -- when you were discussing
16 Exhibit 1511 in your testimony in May, you
17 testified to not seeing any seeps along the length
18 of the area inspected.

19 Do you recall that?

20 A. Yes.

21 Q. And can you please describe the
22 length of the area that you inspected?

23 A. Sure. We walk from just -- there is
24 a fence line on the southeast corner of the

1 property, and we start the inspection several
2 hundred feet to the west of that fence, and then
3 it proceeds down the -- and down the entire length
4 of the intake channel, and then the Des Plaines
5 River all the way up to an area that's just short
6 of the lock and dam.

7 And there is actually kind of an
8 entrance off of Brandon Road that there is a
9 little parking lot there, and that people also
10 drive further back into that property, and there
11 is a lot of evidence of people there doing
12 campfires and fishing and whatnot. So that's
13 basically the entire length that we do.

14 **Q. And flipping to Exhibit 1512, would**
15 **you have walked the same area?**

16 A. Yes.

17 MS. BUGEL: Okay. And we are going
18 to -- Leah is here, and she is going to distribute
19 an exhibit from the liability phase of this
20 hearing.

21 May Leah approach?

22 HEARING OFFICER HALLORAN: Yes.

23 Thank you.

24

1 BY MS. BUGEL:

2 Q. So we have placed in front of you an
3 exhibit that was marked in the previous hearing,
4 Complainants' Exhibit 248N, as in Nancy.

5 And do you need a minute to
6 review that, Mr. Gnat?

7 A. It depends on the question you will
8 ask.

9 Q. Okay. Fair enough. Fair enough.
10 And to refresh everybody's recollection, this is a
11 letter that you wrote, correct?

12 A. Yes, it is.

13 Q. And your signature appears on Bates
14 page 19444?

15 A. Yes.

16 Q. And the -- I call it the Re: line.
17 I don't know what other people call it, but I'm
18 going to refer to the Re: line of the letter,
19 which is, R-E, colon.

20 The Re: line of this letter
21 refers to the Joliet No. 29 Former Ash Burial Area
22 Runoff Inspection 2009. Do you see that?

23 A. Yes.

24 Q. Okay. Where did you get the

1 **terminology formal -- "former ash burial area"?**

2 A. Exactly where -- where that was
3 pulled from, I don't know. It might be what was
4 provided to me as referencing what was in that --
5 I believe it was the 1999 Phase II work that was
6 done prior to purchase of the property by Midwest
7 Generation.

8 **Q. In writing this letter, you decided**
9 **to use that terminology in the Re: line, correct?**

10 A. Right. Again, that was terminology
11 that was given to me. I mean, it's not something
12 that I created or whatnot, but it -- terminology
13 at that time, that's what my understanding was,
14 yes.

15 **Q. And can you please refer to the**
16 **first sentence of this letter? In the first**
17 **sentence, it refers to -- beginning at the very**
18 **end of the first line, "the former ash burial area**
19 **on the northeast side of the Joliet 29 property."**
20 **Do you see that?**

21 A. Yes, "outside the fenced boundary of
22 the facility," yes.

23 **Q. So this letter refers to the same**
24 **area covered by Exhibits 1511 and 1512, correct?**

1 A. Correct. And, you know, just to
2 clarify, we actually start the walk to the west of
3 that fence line, as well as then continue on past
4 it, obviously, but we actually start several
5 hundred feet west of that, yes.

6 **Q. Leah is going to approach you with**
7 **an excerpt of Exhibit 901.**

8 **And, Leah, just to confirm,**
9 **that's page 15 from 901?**

10 MS. BAHRAMIPOUR: Yes.

11 BY MS. BUGEL:

12 **Q. And, Mr. Gnat, you have referred to**
13 **the fence line. Can you please tell us where the**
14 **fence line is?**

15 A. Sure. If you take a look at Ash
16 Pond 3, what's identified here as Ash Pond 3, so
17 you go a little bit to the east of that, you will
18 see kind of a darker, almost triangular-shaped
19 area. And right below that triangular-shaped area
20 and before you see the boundary of the channel,
21 you'll see what looks like a little access road,
22 because that is an access road.

23 And if you take that access road
24 to the east there right to the corner of what

1 would be that triangular-shaped area, that's
2 basically where the fence -- there's a gate there,
3 and that's the gate we would go out, and then that
4 fence goes from that point to the north to just
5 short of Channahon Road there.

6 Q. And, Mr. Gnat, I have given you --
7 or Leah has given you a marker.

8 Can you draw very -- just very
9 approximately onto this exhibit where the fence
10 line is?

11 A. Sure. Got it.

12 MS. BUGEL: And, Mr. Hearing
13 Officer, we believe it would aid the Board to
14 actually have that marked. So this is a new
15 exhibit. I have not yet presented this proposal
16 to Midwest Generation, but -- what number would we
17 do?

18 And we have pre-numbered our
19 other exhibits. So we can mark this and copy it
20 at lunchtime and submit it.

21 So I would move for
22 Complainants' -- can we go off the record for a
23 second?

24 HEARING OFFICER HALLORAN: Sure.

1 (Whereupon, a discussion was had
2 off the record.)

3 MS. GALE: I'm a little confused on
4 the process here. We have not seen what Mr. Gnat
5 has done before we had to answer an opinion on
6 what the motion would be.

7 HEARING OFFICER HALLORAN: Okay.
8 They don't have a copy of this.

9 MS. BUGEL: They have a copy of it,
10 but they don't have it with -- Mr. Gnat's
11 marked --

12 HEARING OFFICER HALLORAN: Okay.
13 Then we will wait until it's marked, and you can
14 make your motion then.

15 MS. BUGEL: Okay.

16 HEARING OFFICER HALLORAN: You may
17 proceed.

18 MS. BUGEL: Very good.

19 BY MS. BUGEL:

20 Q. Mr. Gnat, one question about this.
21 The fenced boundary -- I'm sorry. Or the -- what
22 you have -- what we have referred to as the fence
23 line, that is different from the property line,
24 correct?

1 A. Correct.

2 Q. Okay. So now referring back to
3 Exhibit 248N. So, I'm looking at the first page,
4 Bates page 19442, the first sentence of the second
5 paragraph. This says, "During the inspection KPRG
6 identified five areas outside the fenced boundary
7 of the Joliet No. 29 facility."

8 Do you see that reference?

9 A. Yes.

10 Q. Okay. And the fence line is the
11 same as the fenced boundary, correct?

12 A. Correct.

13 Q. And the fenced boundary is different
14 from the property boundary, correct?

15 A. Correct.

16 Q. And the next sentence goes on -- I'm
17 sorry. Let me finish that sentence.

18 The rest of this sentence goes
19 on to say there was either, quote, "either sheet
20 wash erosion or drilling has exposed the
21 underlying ash slag and may transport the material
22 to the Des Plaines River."

23 Do you see that?

24 A. Yes.

1 Q. And that was true at all five areas,
2 correct?

3 A. I would have to read the description
4 there for each area.

5 Q. Do you want to take a minute to do
6 that?

7 A. Yes, please.

8 Yes, that is correct.

9 Q. And then there was an additional
10 area with erosion identified within the fenced
11 boundary of the Joliet No. 29 facility, correct?

12 A. Yes, Area 6.

13 Q. And looking at the bottom of this
14 exhibit, there is a single bullet -- I'm sorry --
15 the bottom of this page, 19442, there is a single
16 bullet on this page.

17 Do you see that?

18 A. Yes.

19 Q. And that bullet refers to Area 1,
20 correct?

21 A. Yes.

22 Q. And in that bullet, you give the
23 coordinates for Area 1, correct?

24 A. Yes. That was using a little

1 handheld GPS unit, a Garmin-type unit.

2 Q. And those coordinates are, quote,
3 N41 degrees, space, 30.068 and that is that
4 little -- there is a little apostrophe, and then a
5 slash, W88 degrees, space, 06.419 apostrophe,
6 correct?

7 A. Yes.

8 Q. And that apostrophe -- what does
9 that apostrophe stand for?

10 A. Minutes.

11 Q. So these coordinates are --

12 A. Minutes and seconds. 41 degrees,
13 30.068 minutes.

14 Q. So these coordinates are expressed
15 in terms of degrees and minutes, correct?

16 A. Correct.

17 Q. And it's possible to express
18 coordinates in the form of degrees, minutes, and
19 seconds, isn't it?

20 A. Correct.

21 Q. And both -- in your experience, are
22 both degrees and minutes also equally accurate as
23 degrees, minutes, and seconds?

24 A. You know, that depends. In this

1 particular case, 30.0 -- 30.068 minutes, you could
2 convert that to minutes and seconds, if you would
3 like.

4 (Whereupon, Complainants'

5 Exhibit No. 1518 was marked for
6 identification.)

7 BY MS. BUGEL:

8 Q. And we can -- we are passing out a
9 new exhibit, and this is a demonstrative that was
10 provided three days ago, and we have marked this
11 Exhibit 1518.

12 And on this first page, in the
13 search box with the magnifying glass on the upper,
14 left-hand side -- do you see that search box?

15 A. Yes, I do.

16 Q. And in the search box, do you see
17 the same coordinates that we just identified in
18 bullet point Area 1 in Exhibit 248N?

19 A. Yes.

20 Q. And the -- they are expressed
21 slightly differently with the N at the end instead
22 of at the beginning. Do you see that?

23 A. Yes, for -- yes, for -- yes.

24 Q. And then the W is at the end instead

1 **of the beginning?**

2 A. Correct.

3 Q. **And instead of the slash mark, it's**
4 **just a comma in between?**

5 A. Correct.

6 Q. **And below that do you see -- under**
7 **the blue graphic with the buildings, do you see**
8 **the coordinates expressed in degrees, minutes, and**
9 **seconds?**

10 A. Yeah. I haven't done the number
11 crunch myself, but that would -- if you are
12 converting above to minutes and seconds, you know,
13 assuming the number crunch is right. I don't
14 know. But I haven't done it myself.

15 Q. **And do you see a red pin on this**
16 **image?**

17 A. Yes, I do.

18 Q. **Do you have any reason to believe**
19 **that the red pin does not accurately represent**
20 **where Area 1 is located at Joliet No. 29?**

21 MS. GALE: Objection, foundation.

22 HEARING OFFICER HALLORAN:

23 Ms. Bugel?

24 MS. BUGEL: Well, the foundation is

1 that these are the coordinates that Mr. Gnat
2 himself gave, and he has also walked the property
3 and wrote the letter that identified Area No. 1.
4 He's --

5 HEARING OFFICER HALLORAN: I agree.
6 Overruled. He may answer, if he is able.

7 BY THE WITNESS:

8 A. Yes. I believe that's -- if that's
9 the area I'm thinking of, that's probably pretty
10 close, yes.

11 BY MS. BUGEL:

12 Q. Okay. And just to confirm at the
13 bottom of this exhibit, the bottom right-hand
14 corner, it gives a scale, and that scale says
15 1,000 feet. Do you see that?

16 A. Yes, I do.

17 Q. And can you please turn to the
18 second page of this exhibit?

19 A. Yes.

20 Q. And in the upper left-hand in the
21 box with the magnifying glass, do you still see
22 the same coordinates that appear in your letter
23 for Area 1?

24 A. Yes.

1 Q. And in the lower right-hand corner,
2 do you see the scale of 200 feet?

3 A. Yes.

4 Q. And do you see the red pin again?

5 A. Yes, I do.

6 Q. And do you have any reason to
7 believe that that red pin does not accurately
8 represent where Area 1 is located at Joliet 29?

9 A. No. It seems approximately right.

10 Q. And turning back to Exhibit 248N,
11 can you please turn the page to Bates page 19443?

12 A. Okay.

13 Q. And do you see a bullet, the first
14 bullet on this page?

15 A. Yes.

16 Q. And that bullet refers to Area
17 No. 2?

18 A. Yes.

19 Q. And you give the coordinates for
20 Area No. 2, correct?

21 A. Yes, I do.

22 Q. And those coordinates are N41
23 degrees, 29.950 minutes, slash, W88 degrees,
24 06.621 minutes, correct?

1 A. Correct.

2 Q. And turning to page 3 of
3 Exhibit 1518, in the search box in the upper
4 left-hand corner with the magnifying glass, do you
5 see the same coordinates that you gave in
6 Exhibit 248N?

7 A. Yes.

8 Q. And those are the coordinates for
9 Area 2, correct?

10 A. That is correct, yes.

11 Q. And do you see the red pin on this
12 image?

13 A. Yes, I do.

14 Q. Do you have any reason to believe
15 that that red pin does not accurately represent
16 where Area 2 is located at Joliet 29?

17 A. No. That appears roughly correct.

18 Q. And in the lower right-hand corner,
19 you see the scale showing 500 feet, correct?

20 A. Yes.

21 Q. Okay. And can you please turn to
22 page 4 of Exhibit 1518?

23 A. Okay.

24 HEARING OFFICER HALLORAN: Is that

1 Area 4, Ms. Bugel?

2 MS. BUGEL: I'm -- no. We are on
3 page 4.

4 HEARING OFFICER HALLORAN: Okay.

5 MS. BUGEL: And in the upper
6 left-hand corner it should still say Area 2.

7 HEARING OFFICER HALLORAN: Thank
8 you.

9 BY MS. BUGEL:

10 Q. And Mr. Gnat, you see it still says
11 Area 2 in the upper left-hand corner?

12 A. Yes.

13 Q. And in the box with the magnifying
14 glass, do you see the same coordinates that you
15 gave for Area 2 in Exhibit 248N?

16 A. Yes, I do.

17 Q. And do you see the red pin again?

18 A. Yes.

19 Q. And do you have any reason to
20 believe that that red pin does not accurately
21 represent where Area 2 is located at Joliet 29?

22 A. That looks roughly correct.

23 Q. And turning back to Exhibit 248N,
24 can you please look at the second bullet point on

1 **Bates page 19443?**

2 A. Okay.

3 Q. And that bullet refers to Area 3,
4 correct?

5 A. Correct.

6 Q. And that bullet gives the
7 coordinates for Area 3, correct?

8 A. Yes, it does.

9 Q. And those coordinates are N41
10 degrees, 29.916 minutes, slash, W88 degrees,
11 06.683 minutes, correct?

12 A. Correct.

13 Q. And can you please turn to page 5 of
14 Exhibit 1518?

15 A. Okay.

16 Q. And in the search box with the
17 magnifying glass, do you see the same coordinates
18 that you gave in Exhibit 248N for Area 3?

19 A. Yes.

20 Q. And you see the red pin on this
21 image?

22 A. Yes, I do.

23 Q. And do you have any reason to
24 believe that the red pin does not accurately

1 **represent where Area 3 is located at Joliet 29?**

2 A. No.

3 Q. **And do you see the scale in the**
4 **lower, right-hand corner?**

5 A. Yes.

6 Q. **And that scale now shows 200 feet --**
7 **I'm sorry.**

8 **That shows 500 feet?**

9 A. Five hundred feet, correct.

10 Q. **Thank you. And can you please turn**
11 **to page 6 of Exhibit 1518? And in the search box,**
12 **do you still see the same coordinates that you**
13 **gave for Area 3?**

14 A. Yes.

15 MS. GALE: Objection. That's not
16 what the document says on page 6 underneath Area
17 3.

18 BY THE WITNESS:

19 A. Page 6, Area 3. Yeah, that's --
20 yeah. That's incorrect, yes.

21 BY MS. BUGEL:

22 Q. **All right. Okay.**

23 A. Those are Area 2 and --

24 Q. **It's the coordinates for Area 2.**

1 So just to be clear, page 5 is
2 for Area 3, but page 6 is for Area 2.

3 Okay. And turning back to
4 liability hearing Exhibit 248N, can you please
5 refer back to Bates page 19443?

6 A. Okay.

7 Q. And do you see the third bullet on
8 this page?

9 A. Yes.

10 Q. And that bullet refers to Area 4,
11 correct?

12 A. Correct.

13 Q. And you give the coordinates for
14 Area 4, correct?

15 A. Yes.

16 Q. And those coordinates are N41
17 degrees, 29.894 minutes, slash, W88 degrees,
18 06.732 minutes, correct?

19 A. Correct.

20 Q. And looking in the search box with
21 the magnifying glass in Exhibit 1518, it gives the
22 same coordinates on page 7, correct?

23 A. Yes.

24 Q. And those are the coordinates for

1 **Area 4, correct?**

2 A. Yes.

3 Q. And do you see the red pin on page
4 **7?**

5 A. Yes, I do.

6 Q. And do you have any reason to
7 **believe that the red pin does not accurately**
8 **represent where Area 4 is located at Joliet**
9 **No. 29?**

10 A. No. I have -- that looks roughly
11 correct.

12 Q. And if you look in the lower
13 **right-hand corner, does the scale show 1,000 feet?**

14 A. Yes, it does.

15 Q. And turning the page to page 8, in
16 **the search box with the magnifying glass in the**
17 **left -- upper left-hand corner, do you still see**
18 **the same coordinates that you gave for Area 4?**

19 A. Yes, I do.

20 Q. And in the lower right-hand corner,
21 **do you see the scale of 200 feet?**

22 A. Yes.

23 Q. And do you have any reason to
24 **believe that the red pin does not accurately**

1 represent where Area 4 is located at Joliet

2 No. 29?

3 A. Roughly, it appears to be roughly
4 correct, yes.

5 Q. And turning the page. I'm sorry.
6 Let's start by turning back to Exhibit 248N, Bates
7 page 19443. Do you see the last bullet on this
8 page?

9 A. Yes.

10 Q. And that bullet references Area
11 No. 5, correct?

12 A. Correct.

13 Q. And it provides the coordinates for
14 Area No. 5, correct?

15 A. Yes, it does.

16 Q. And those coordinates are N41
17 degrees, 29.889 minutes, slash, W88 degrees,
18 06.947 minutes; is that correct?

19 A. Yes.

20 Q. And before the slash, is
21 the operator -- I'm sorry -- is the apostrophe
22 missing?

23 A. Yes.

24 Q. But that still represents to you

1 **29.889 minutes, right?**

2 A. Correct.

3 Q. And looking at page 9 of
4 **Exhibit 1518 labeled Area 5, do you see the same**
5 **coordinates in the search box on the upper**
6 **left-hand side with the magnifying glass?**

7 A. Yes, I do.

8 Q. And those are the same coordinates
9 **that you gave in Exhibit 428N for Area 5?**

10 A. Yes.

11 Q. And do you see a red pin on this
12 **image?**

13 A. Yes, I do.

14 Q. And do you have any reason to
15 **believe that the red pin does not accurately**
16 **represent where Area 5 is located at Joliet**
17 **No. 29?**

18 A. That's roughly correct.

19 Q. And looking at that red pin, that is
20 **not on the banks of the Des Plaines River,**
21 **correct?**

22 A. That is along the intake channel,
23 **correct.**

24 Q. And -- and looking in the lower

1 right-hand corner, the scale shows 1,000 feet,
2 correct?

3 A. Yes.

4 Q. Based on that scale, do you have any
5 approximation of how far that pin is from the Des
6 Plaines River?

7 A. As the crow flies or along the bank?

8 Q. As the crow flies.

9 A. Two hundred feet, three
10 hundred feet.

11 Q. Okay. Thank you. And can you
12 please turn to page 10? And do you see the scale
13 in the lower right-hand corner?

14 A. Yes, I do.

15 Q. That scale now shows 200 feet,
16 correct?

17 A. Correct.

18 Q. And do you see the search box in the
19 upper left-hand corner with the magnifying glass?

20 A. Yes.

21 Q. And that search box still contains
22 the coordinates for Area No. 5, correct?

23 A. Yes, it does.

24 Q. Do you have -- and do you see the

1 **red pin on this?**

2 A. Yes, I do.

3 Q. Do you have any reason to believe
4 that the red pin does not accurately represent
5 where Area 5 is located at Joliet No. 29?

6 A. That looks roughly correct.

7 Q. And can you please turn to
8 exhibit -- well, let me stop there.

9 **Complainants move for**
10 **Exhibit 1518 to be admitted into the record.**

11 HEARING OFFICER HALLORAN: Ms. Gale?

12 MS. GALE: We would object to the
13 admission of this document. It's inaccurate at
14 least for one of the areas, and it also -- he
15 estimated, but he wasn't sure why the difference
16 between the search and the result. So it's just
17 foundation on whether the results are accurate.

18 HEARING OFFICER HALLORAN: I thought
19 this was a demonstrative Exhibit. 1518?

20 MS. BUGEL: Yes. It's a
21 demonstrative. Then, do we --

22 HEARING OFFICER HALLORAN: No. You
23 can -- yeah. Is your objection still the same?

24 MS. GALE: Yes. As an exhibit, yes.

1 HEARING OFFICER HALLORAN: Okay.
2 Well, I'm going to accept it as -- excuse me -- a
3 demonstrative exhibit. It may assist the Board.
4 It has no probative value. Thank you.

5 MS. BUGEL: Mr. Gnat -- actually,
6 Hearing Officer, can I make one recommendation,
7 that we just have Mr. Gnat use the marker to
8 correct Area 4?

9 HEARING OFFICER HALLORAN: Yes. And
10 then I guess you will make a copy when able,
11 hopefully sooner than later, and then you will
12 move it, and then Ms. Gale will have her time to
13 object?

14 MS. GALE: Yes.

15 HEARING OFFICER HALLORAN: Okay.
16 Yes, yes, you may.

17 BY MS. BUGEL:

18 Q. Mr. Gnat, can you please go back to
19 Area 3 on page 6? And are you on Area 3, page 6?

20 A. Yes.

21 Q. And can you please take the marker
22 we provided to you and cross out Area 3 and just
23 replace that with 2?

24 A. Okay.

1 Q. Thank you. And -- and you can set
2 that aside for the moment.

3 And can you please turn back to
4 Exhibit 248N, Bates page 19444?

5 A. Okay.

6 Q. And on this page, do you see where
7 it states Area 6?

8 A. Yes.

9 Q. And this says Area 6 is located
10 within the fenced boundary of the Joliet No. 29
11 facility, approximately 500 feet west of Area 5.

12 Do you see that?

13 A. Yes.

14 Q. And Area 6, you do not provide
15 coordinates for Area 6, correct?

16 A. That is correct.

17 Q. Okay. And turning -- earlier I gave
18 you page 15 of Exhibit 901. Do you still have
19 that in front of you?

20 A. The -- this map?

21 Q. Yes.

22 A. Yes.

23 Q. On that, could you just mark
24 approximately where Area 6 is located?

1 A. I can do it approximately, but I
2 don't have a scale on this map here. So unless
3 it's up at the top, but I don't see a scale. So
4 I'm going to be guessing based on having been
5 there, but, you know, saying here it's 500 feet.
6 It looked less, but I don't have a scale on this
7 map, but --

8 Q. Well, let me interrupt you then.

9 Would it be easier for you to do
10 that on Exhibit 1518, page 10, that has Area 5
11 marked, and has the scale of 200 feet in the lower
12 right-hand corner?

13 A. Yeah. I can -- I can mark it on
14 that.

15 Q. Okay. So if you could please draw a
16 block dot approximately where Area 5 is, and then
17 indicate -- just write Area 5 -- add a 6 -- and 6
18 in the upper left-hand corner. Where it says Area
19 5, we can add a 6 to that.

20 A. Okay.

21 Q. And just -- we can set those aside.
22 We are going to move on to Exhibit 15 -- sorry.

23 We are going to look back at
24 1513 before we distribute the next exhibit.

1 **Exhibit 1513, and this is in binder 2 or book 2,**
2 **the very last exhibit.**

3 A. Okay.

4 Q. Mr. Gnat, do you recall referencing
5 dredging of the Des Plaines River when you were
6 testifying as to this exhibit in May?

7 A. If I recall, when I would see the
8 big chunks of dolomite and so on, that -- you
9 know, that was probably from dredging operations
10 of the channel. That's what my reference was to,
11 yes.

12 Q. And were you involved in --
13 personally involved in any dredging of the Des
14 Plaines River?

15 A. No, I was not.

16 Q. Were you involved in any
17 construction of any part of the lock and dam
18 system on the Des Plaines River?

19 A. No, I was not.

20 Q. Do you have any first-hand knowledge
21 regarding the placement of dredged spoils from
22 dredging at the Des Plaines River?

23 A. No.

24 Q. And you are not appearing as an

1 **expert witness in this proceeding, correct?**

2 A. Correct.

3 Q. So you are here as a fact witness,
4 correct?

5 A. Yes.

6 Q. And you are not offering any expert
7 opinions on dredging or dredged spoils, correct?

8 A. That is correct.

9 Q. And we can now distribute
10 Exhibit 1519.

11 (Whereupon, Complainants'
12 Exhibit No. 1519 was marked for
13 identification.)

14 BY MS. BUGEL:

15 Q. And, Mr. Gnat, Exhibit 1519 is also
16 a series of photos, correct?

17 A. Yes.

18 Q. And these photos -- are these photos
19 familiar to you?

20 A. They look like pictures I would
21 take, but I don't know when they were taken.
22 There is --

23 Q. Do these --

24 A. Do you know what -- you know, which

1 of my inspections this one was out of?

2 **Q. These photos were part of**
3 **Exhibit 1513. Do those now look familiar to you,**
4 **that they are from the same series as**
5 **Exhibit 1513?**

6 A. I am assuming that's correct. I --
7 you know, I -- pictures are pictures. They --
8 assuming they are -- this one says Exhibit 1519.
9 This one says Exhibit 1513. So they certainly
10 look like pictures I have taken. I don't know if
11 it's from the same walk or from a previous -- from
12 the previous years. That's the only thing I can't
13 put together.

14 **Q. Okay. Do you see that the Bates**
15 **numbers are sequential?**

16 A. On the Exhibit 1513 here that's in
17 my book, there are no Bates numbers available or
18 that are legible or that I can see.

19 MS. BUGEL: Can we go off the record
20 for a second?

21 (Whereupon, a discussion was had
22 off the record.)

23 HEARING OFFICER HALLORAN: Okay. We
24 are back on the record. Sorry, Mr. Gnat.

1 BY THE WITNESS:

2 A. All right. Now -- now, I have a set
3 here with the Bates numbers. So, yes, it appears
4 it's from the same -- same sequence.

5 BY MS. BUGEL:

6 Q. So -- so do the -- does the area
7 photographed in these pictures, is it familiar to
8 you?

9 A. Yes.

10 Q. Okay. And these photos were taken
11 at the northeast area at Joliet, correct?

12 A. Correct. During that site walk,
13 yes.

14 Q. And the photos -- you took the
15 photos during a walkover inspection of that
16 northeast area?

17 A. Yes.

18 Q. And looking at Bates 108284, there
19 are no cobbles visible in this picture, correct?

20 A. That is correct. Along this part of
21 the intake, by the intake channel here, I do not
22 remember seeing lots of those cobbles, which you
23 see further on when you are along the Des Plaines
24 River, correct.

1 **Q. And can you please page through**
2 **108285 and go through 108292 and tell me if you**
3 **see any cobbles in this next eight pages?**

4 A. So, on -- I will go along here.
5 No. 285, that picture is taken a little bit
6 further up from the bank, but I just note all
7 along this part of the bank, I don't remember
8 seeing very much in terms of cobble. The 286, no.
9 That's just inside the fence there. 287, no
10 cobbles there. This is all one side of the fence
11 there.

12 289, that's a picture facing the
13 other way up into the -- so we are not even
14 looking at the -- at the -- at the river here at
15 this point. Same with 290. And then 291 -- and I
16 believe I'm -- I'm pretty sure I know where this
17 is taken. This is right as you are approaching
18 where the intake splits off from the river itself,
19 but I do believe that there is a little bit of
20 cobble at this point along the channel, and it's
21 almost evident in the picture in here. So that's
22 kind of where -- if I remember right, where you
23 start seeing that cobble that I refer to as
24 probably dredging from the channel.

1 **Q. And --**

2 A. And then 292 -- I believe you said
3 through 292?

4 **Q. Yes.**

5 A. Again, this picture is looking away
6 from the channel, so I wouldn't expect to see
7 anything there in terms of cobble.

8 **Q. And turning to the next page, which**
9 **is 108302, there are no cobbles visible in this**
10 **picture either, correct?**

11 A. I wouldn't necessarily say from this
12 angle that you would be able to see it, but I'm
13 looking a little bit further up. I'm standing up
14 on top. So I'm not necessarily looking straight
15 down. So I wouldn't necessarily say that
16 absolutely that I see -- would see no -- or none
17 of that type of cobble there. It could just be
18 the view of this picture.

19 **Q. In the picture, in the view, there**
20 **is no cobble visible, correct?**

21 A. I think that would be correct, yes.

22 **Q. And turning to the next page,**
23 **108313, if you could flip for the next six pages**
24 **through 108318, and tell me whether there are any**

1 **cobbles visible in any of these pictures?**

2 A. No. And I wouldn't expect any.
3 These are all pictures looking more towards the
4 interior, because I'm not just looking at the
5 bank, but also the interior. So all of those
6 pictures through the 318, from 313 to 318, are
7 looking away from -- from the embankment. So I
8 wouldn't expect to see any there.

9 Q. **And can you please turn to 108323?**

10 A. Yes.

11 Q. **And if you can look through the next**
12 **set of six pictures, from 108323 to 108328. There**
13 **are no cobbles visible in any of these pictures,**
14 **correct?**

15 A. Again, that entire sequence of
16 pictures is from the internal part then of my site
17 inspection, so not along the bank. So I wouldn't
18 expect to see the cobbles there, at the surface at
19 least.

20 Q. **And just to confirm, in the**
21 **pictures, you don't see any cobbles, correct?**

22 A. Correct.

23 Q. **And turning to Bates 108329, there**
24 **are no cobbles visible in this picture, correct?**

1 A. Correct. Again, quite a distance
2 off the bank.

3 **Q. So you are quite a distance from the**
4 **river, correct?**

5 A. Correct.

6 **Q. How far -- do you have any estimate**
7 **of how far you are from the river?**

8 A. Kind of hard to tell on the scale
9 here. You can see the river in the background
10 there, so a couple hundred feet.

11 **Q. And if you could page through the**
12 **next five pages and tell me whether there are any**
13 **cobbles visible in any of these pictures?**

14 A. Five pages? That is correct.
15 Again, these are interior pictures. So not along
16 the embankment.

17 **Q. And if you could turn to Bates page**
18 **108335.**

19 A. Okay.

20 **Q. There are no cobbles visible in this**
21 **picture, correct?**

22 A. That's correct. Pretty heavily
23 overgrown here, but getting closer to the bank
24 knowing kind of where this picture is taken, there

1 is cobble there. You just don't see it in this
2 picture. It's a little bit further off the bank.

3 **Q. And you do see the river in this**
4 **picture, though, correct?**

5 A. Yes.

6 **Q. And you can see the river in the**
7 **upper right-hand corner?**

8 A. The upper right-hand corner is the
9 sky. The river is kind of right in the middle
10 where you can see through the bushes.

11 **Q. So looking at the upper right-hand**
12 **corner, it's your testimony that --**

13 A. Oh, no, I take it back. Yep.
14 That's water there. You are correct. So, yep,
15 the river goes along there. I was focused in
16 on -- I'm looking right through the -- through the
17 brush here.

18 **Q. That white spot in the middle looks**
19 **to be a bright reflection from the river, correct?**

20 A. Yeah, either that or just a sun
21 reflection on the lens or whatnot, but yes.

22 **Q. Okay.**

23 A. And yeah, upper right, you are
24 correct. That is water.

1 **Q. Okay. And turning to the next page,**
2 **this Bates 108337, there are no cobbles visible in**
3 **this picture, correct?**

4 A. If this is the particular area I'm
5 thinking of, by the angle of this picture, no, you
6 will not see any. Cobbles will be over to the
7 right.

8 **Q. And there is a -- do you see what**
9 **looks like a metal pole in this picture?**

10 A. Yes.

11 **Q. And do you know where that's located**
12 **at the Joliet 29 property?**

13 A. If I -- I'm just looking at this
14 picture, and, you know, it's a pole that was when
15 we were doing the repairs. It was probably
16 anchoring down a hay log. So I can -- yeah,
17 wherever we did our repairs, you will generally
18 find some of these remnants still there.

19 **Q. So this is one of the areas that you**
20 **believe you repaired?**

21 A. Not I believe. Yes, it is one of
22 the areas I repaired.

23 **Q. Fair enough. And do you know which**
24 **area?**

1 A. Okay. 108342, no, you cannot see
2 any cobbles in this picture. And if I recognize
3 this area correctly, I wouldn't expect to either.
4 108343, same. This is an area right by the fence.
5 That's not an area -- it's along the intake
6 channel. So it's not an area where I'd see
7 cobble.

8 **Q. And, Mr. Gnat, the fence in 108343,**
9 **what fence is that?**

10 A. That is that east fence line.
11 That's that northeast corner.

12 **Q. So that is not the property line,**
13 **correct?**

14 A. That is correct. 108344, no, you
15 cannot see any cobbles in this. Pretty well
16 overgrown. The repairs we put in are holding
17 pretty well. 108345, same area, just another --
18 whenever I do these site walks, I usually try and
19 document some of the areas that we did the repairs
20 on, just to be able to document how they are
21 holding up, and these particular pictures are
22 documenting that and showing how well put in
23 the -- or how well the vegetation has taken over
24 at this point, which is what we want.

1 **Q. Okay. And turning to the last set**
2 **of pictures that go from 108382 through 108393,**
3 **can you confirm that there are no cobbles visible**
4 **in any of these pictures?**

5 A. All the way through 108393, these
6 are all, again, pictures of the internal part away
7 from the embankment. So it's at the surface you
8 certainly don't see any pictures -- or don't see
9 any cobbles and haven't seen them in the past, and
10 they are certainly not on the picture.

11 **Q. Thank you. And Complainants move**
12 **for Exhibit 1519 to be admitted into the record.**

13 HEARING OFFICER HALLORAN: Ms. Gale?

14 MS. GALE: No objection.

15 HEARING OFFICER HALLORAN: Thank
16 you. Complainants' Exhibit 1519 is admitted. No
17 objection.

18 (Whereupon, Complainants'
19 Exhibit No. 1519 was admitted
20 into evidence.)

21 BY MS. BUGEL:

22 **Q. And bear with me a minute here while**
23 **I flip over.**

24 **And, Mr. Gnat, earlier today you**

1 **were discussing the northwest area at Joliet.**

2 **Do you recall that?**

3 A. Yes.

4 **Q. And have you ever seen cobbles in**
5 **the northwest area?**

6 A. Similar to what we -- what I was
7 referring to in terms of my walks?

8 **Q. Yes.**

9 A. No. I mean, there are chunks of
10 dolomite. You have got bedrock pretty close to
11 the surface there, and there are some chunks
12 laying around, but not -- I don't view that the
13 same as my embankment walk.

14 **Q. And when you say you don't view that**
15 **the same as your embankment area, are you saying**
16 **you don't see cobbles in the northwest area that**
17 **are similar to cobbles you have seen in the**
18 **embankment area?**

19 A. I guess I would view that when I'm
20 walking along a channel like the Des Plaines River
21 or Chicago Sanitary Ship Canal or whatever, and
22 you see big chunks of dolomite and limestone,
23 knowing that these things have been ripped through
24 the bedrock to deepen channels and so on for

1 navigation, you know, you kind of make that
2 correlation.

3 Okay. This is from the -- you
4 know, the process, the construction process.
5 You're right there by the lock and dam. Up in the
6 northwest area, I'm well away from that, so I
7 can't make that association. I do know that
8 bedrock is fairly shallow. I do know that fill
9 that people use for roads and whatnot includes --
10 you know, in the area coming from local quarries
11 can include dolomite of various sizes and so on.

12 So when I see a larger chunk or
13 something of dolomite laying on an internal piece,
14 I don't have that connection. I'm not walking
15 right along the bank of a navigational waterway
16 that I know has been dredged.

17 **Q. Earlier today you talked about the**
18 **northwest area being sampled potentially for**
19 **construction for a wind break for the coal pile.**

20 **Do you recall that?**

21 A. Yes.

22 **Q. Was ash from the northwest area ever**
23 **used for that wind break?**

24 A. That project, the request for

1 proposal went out, but that project never
2 materialized.

3 Q. So I think you answered my next
4 question, which is, do you know if the wind break
5 was ever constructed?

6 A. Not to my understanding.

7 Q. And you also were talking about
8 Powerton earlier today.

9 Do you recall that?

10 A. Yes.

11 Q. And you were talking about water
12 levels rising, and I believe it was in relation to
13 the Secondary Ash Basin.

14 Do you recall that?

15 A. Yes.

16 Q. And you said you never saw -- you
17 yourself never saw water levels 30 feet above the
18 bottom of the ash basin, correct?

19 A. Above the Service Water Basin, and I
20 believe I said neither myself, nor any of my
21 sampling crews that would go out there. I'd
22 imagine if an entire impoundment was under water,
23 they would let me know.

24 Q. How many days per year do you go to

1 **Powerton?**

2 A. I -- there are crews out there doing
3 quarterly sampling, and the sampling around there
4 takes roughly five days. So one week per quarter.

5 **Q. So five days per quarter?**

6 A. Correct.

7 **Q. And four times a year?**

8 A. Correct. And then if we have to do
9 a resampling, you know, we go out there. We also
10 do monthly -- at this point monthly water levels
11 at Powerton as well. So one for another day a
12 month for the months in between the quarters
13 somebody is out there as well, yes.

14 **Q. Okay. So your crews, if my math is**
15 **correct, spend at -- approximately 37 days per**
16 **year at Powerton?**

17 A. Probably correct, yes.

18 **Q. And we had an exhibit that was the**
19 **site map of -- I'm sorry. Not the site map, but a**
20 **KPRG satellite image of Powerton. I don't have**
21 **the name for it, but can you find that in front of**
22 **you still?**

23 A. Which book would that be in, or
24 which --

1 Q. That would be in book 3.

2 A. The excerpt from Exhibit 1307?

3 Q. I believe so. So you have the
4 excerpt of 1307 in front of you?

5 A. Yes.

6 Q. And can you please tell me whether
7 there are monitoring wells along the west side of
8 the channels?

9 A. There is -- there are two channels.
10 There is -- the ash ponds are on -- or the ash
11 basins are on the east side of the eastern most
12 channel shown there. There are no wells to the
13 west of that channel.

14 Q. And then there is another channel,
15 correct?

16 A. Correct, there is another channel.

17 Q. And the second channel is west of
18 the channel next to the ponds?

19 A. Correct.

20 Q. And are there monitoring wells along
21 the west side of the western most channel?

22 A. No.

23 Q. Are there monitoring wells located
24 in between the two channels?

1 A. No.

2 Q. So when you or your crew are out
3 there doing the groundwater monitoring, you are
4 not walking between the channels, correct?

5 A. That is correct.

6 Q. And when you and your crew are out
7 there, you are not walking along the west side of
8 the channels when you are doing -- checking the
9 monitoring wells?

10 A. Correct.

11 Q. And I want to turn to Waukegan. You
12 discussed Waukegan today, correct?

13 A. Yes.

14 Q. Okay. And you discussed the
15 adjustment of the east berm of the East Pond at
16 Waukegan, correct?

17 A. Yes.

18 Q. What adjustment needed to be made?

19 A. I wasn't involved on that. I
20 believe that was part of the inspection. On the
21 stability inspection, I believe that height of the
22 wall had to come down a little bit, but again, I
23 wasn't part of that project. It was a different
24 firm.

1 Q. Is it your understanding that the
2 height of the wall needed to come down for
3 stability purposes?

4 A. I don't know for the specific
5 purpose, but that's my understanding. You know,
6 again I was -- our firm did not do that.

7 Q. But was your firm involved in the
8 construction permit for that adjustment?

9 A. No.

10 Q. And I want to refer to Will County
11 now. You testified as to Will County this morning
12 as well, correct?

13 A. Yes.

14 Q. And your firm has been involved in
15 work for Midwest Gen under the federal CCR rule,
16 correct?

17 A. Yes.

18 Q. And the federal CCR rule came into
19 force in 2015; is that correct?

20 A. Yes.

21 Q. And the Illinois EPA CCR rule came
22 into force later than the federal CCR rule,
23 correct?

24 A. I believe, 2021.

1 **Q. And there were closure plans for the**
2 **Will County ponds under the federal rule, correct?**

3 A. Yes. I believe that 2 South, 3
4 South were under the federal rule.

5 **Q. And you referenced a -- you**
6 **referenced a meeting last week for the Will County**
7 **ponds, correct?**

8 A. Yes.

9 **Q. And that meeting was for the**
10 **purposes of the Illinois CCR rule, correct?**

11 A. That, as well as under the federal
12 rule, for corrective action, assessment of
13 corrective measures for Ponds 2 South, 3 South,
14 yes.

15 **Q. And that -- one of the purposes of**
16 **that meeting was to present an alternatives**
17 **analysis, correct?**

18 A. Yes.

19 **Q. And that -- at that meeting, was it**
20 **communicated that the selected alternative for**
21 **closure of 2 South and 3 South was cap in place;**
22 **is that correct?**

23 A. Yeah. I believe the preferred
24 alternative that was identified for the public

1 meeting was to cap in place, yes.

2 **Q. Do you know what the preferred**
3 **alternative was under the federal rule prior to**
4 **the Illinois EPA rule going into effect?**

5 MS. GALE: Objection.
6 Mischaracterizes the documents. There -- there is
7 no preferred alternative under the federal rule.

8 HEARING OFFICER HALLORAN:
9 Ms. Bugel?

10 MS. BUGEL: I'll rephrase.

11 HEARING OFFICER HALLORAN: Thank
12 you.

13 BY MS. BUGEL:

14 **Q. Do you know if there was an**
15 **alternative for closure of Ponds 2 South and 3**
16 **South selected for Will County under the federal**
17 **rule?**

18 A. I believe that you have to identify
19 what you are thinking that the -- the closure
20 might be at that point. What it was back in 2015
21 and what was developed, I -- honestly, I don't
22 remember. That was more of the engineering side
23 of the house.

24 **Q. Okay. Okay. Moving on.**

1 **We are placing in front of you**
2 **an exhibit that has been marked as Exhibit 1520.**

3 A. Yes.

4 (Whereupon, Complainants'
5 Exhibit No. 1520 was marked for
6 identification.)

7 BY MS. BUGEL:

8 **Q. And, Mr. Gnat, are you familiar with**
9 **this document?**

10 A. Yes, I am.

11 **Q. And did your firm work on this**
12 **document?**

13 A. Yes. We worked on it. You know,
14 again, there are probably some aspects of this,
15 that were brought in from other firms as well, but
16 certainly worked on it and pulled this together,
17 yes.

18 **Q. And it has KPRG -- a KPRG header on**
19 **the first page?**

20 A. Yes, it does.

21 **Q. And you, yourself, were involved in**
22 **the preparation of this document?**

23 A. Portions of it, yes. I'm just
24 trying to see. There is so many different

1 documents that are generated as part of these
2 submittals that I want to -- so, yes, I would have
3 been involved in the geology and hydrogeology
4 aspect of it, and any -- if the -- I don't know if
5 this document includes any of the support
6 modeling? Yes, it does. And I was also involved
7 in the direction and interpretation of some of the
8 modeling efforts in support of the alternatives
9 analysis.

10 **Q. And this -- this is the document**
11 **that was being discussed at the meeting that you**
12 **referenced last week, correct?**

13 A. That is correct, yes.

14 **Q. And you attended that meeting?**

15 A. Yes, I did.

16 **Q. And you answered questions at that**
17 **meeting?**

18 A. Yes, I did.

19 **Q. And do you know if this document has**
20 **an appendix that covers cost figures for the**
21 **closure alternatives?**

22 MS. GALE: Mr. Hearing Officer, we
23 are going to object to the questions about this
24 document. This document is -- you know, there was

1 an objection earlier about the lateness of
2 documents. This document is very recent, and, you
3 know, we -- the Complainants have routinely
4 objected to, you know, surprise and lateness. And
5 so we would also have an objection to surprise and
6 lateness of documents here.

7 HEARING OFFICER HALLORAN: I think
8 one of them was the recent FOIA request.

9 But, anyway, Ms. Bugel.

10 MS. BUGEL: On direct Mr. Gnat
11 brought up the meeting -- the hearing -- sorry --
12 the meeting of last week; discussed it, raised
13 this very document by referencing that meeting and
14 discussing the goings on, and --

15 HEARING OFFICER HALLORAN: Yeah. I
16 agree. I think -- you know, I think the door was
17 opened.

18 And so overruled. You may
19 continue.

20 BY MS. BUGEL:

21 **Q. So one question. Is there a table**
22 **of cost figures for cost estimates for the closure**
23 **alternatives in this document?**

24 A. I don't think that was included in

1 this document. Oh, no, it is, absolutely. Table
2 2. It appears to be Table 2.

3 Q. And Table 2 contains the closure
4 alternatives analysis cost estimates comparison;
5 is that correct?

6 A. That is correct, yes.

7 Q. And do you recall any questions
8 about cost estimates being asked at that meeting
9 last week?

10 A. Yes.

11 Q. Okay. All right. Complainants move
12 for Exhibit 1520 to be admitted into the record.

13 HEARING OFFICER HALLORAN: Ms. Gale?

14 MS. GALE: Objection to relevance.

15 I mean, she talked about one table. Same
16 objections that we have had routinely. This is a
17 pretty large document, very technical. They have
18 talked about one table. This also, again, is a
19 surprise to us, which that has been upheld before,
20 and, you know, we just don't see how it's
21 relevant.

22 Yes, he testified that he sat in
23 a meeting last week pursuant to the Illinois CCR
24 rule to discuss compliance with that rule, but

1 that doesn't make this document relevant to these
2 proceedings, which are related to the compliance
3 with the groundwater rules under 620.

4 HEARING OFFICER HALLORAN:

5 Ms. Bugel?

6 MS. BUGEL: This -- we have
7 established that the document pertains to the
8 meeting, and closure alternatives were being
9 discussed at the meeting, and closure alternatives
10 are discussed in the document very generally. In
11 addition, closure alternatives are very relevant
12 to the remedy at issue in this proceeding.

13 HEARING OFFICER HALLORAN: I will
14 allow one more response, Ms. Gale.

15 MS. GALE: Well, closure -- again,
16 this is -- closure alternatives are important for
17 this Illinois CCR rule analysis. This is a
18 document acquired by -- under Part 845. This
19 proceeding is not an analysis of compliance with
20 Part 845. This proceeding is related to
21 compliance with 620 and any remedy that may -- the
22 Board may consider.

23 Now, but again, that doesn't
24 establish that this document is relevant to the

1 Board on deciding what its -- what its
2 decisionmaking should be.

3 MS. BUGEL: May I respond?

4 HEARING OFFICER HALLORAN: Last
5 time. Thank you.

6 MS. BUGEL: Okay. The -- this goes
7 to the heart of this proceeding, is how to address
8 the violations. This goes through closure
9 alternatives for the ponds, which is one option at
10 the Board's disposal for remedy. So this is --
11 they are hand in hand. Even if they are under
12 different legal -- legal framework, they --
13 it's -- all the same options can be considered for
14 both closure and for remedy in this proceeding.

15 HEARING OFFICER HALLORAN: Yeah. I
16 think it's relevant, and it possibly could assist
17 the Board. Midwest's objections are noted for the
18 record, but I will admit it over objection.

19 Complainants' Exhibit 1520 is
20 admitted.

21 (Whereupon, Complainants'
22 Exhibit No. 1520 was admitted
23 into evidence.)

24 MS. BUGEL: And, Hearing Officer,

1 may I have five minutes to confer with co-counsel?
2 We are virtually wrapping up. I just want to make
3 sure I have covered everything.

4 HEARING OFFICER HALLORAN: Okay. We
5 are off the record.

6 (Whereupon, a short break was
7 taken.)

8 HEARING OFFICER HALLORAN: All
9 right. We are back on the record. Thank you.

10 Ms. Bugel.

11 BY MS. BUGEL:

12 Q. Yes. We are referring back to the
13 excerpt of Exhibit 601 from May. And Leah has
14 pulled this out of the boxes for the witness, for
15 Mr. Gnat.

16 And, Mr. Gnat, just could you
17 please grab Exhibit 1518, which is hopefully still
18 in front of you? And referring to the excerpt of
19 Exhibit 601, you discussed this area of land that
20 is not necessarily owned by Midwest Generation in
21 your testimony in May.

22 Do you recall that?

23 A. Yes.

24 Q. And you on the record described the

1 **area. Do you recall that?**

2 A. Yes.

3 Q. **And Exhibit 601, does this show the**
4 **property line, and this -- does this show the**
5 **property line as the Joliet No. 229 station?**

6 A. My understanding is this is the
7 property line that was surveyed and associated
8 with the project there for the Army Corp of
9 Engineers, and that is the property line that --
10 there is that strip of land there that is
11 actually, I believe DNR property or Army Corp of
12 Engineers property, but not Midwest Generation
13 property, correct.

14 Q. **Okay. And Exhibit 601, the expert**
15 **shows that little strip of land that is not**
16 **Midwest Gen property?**

17 A. Yes.

18 Q. **Okay. And referring back to**
19 **Exhibit 1518, can you just look at Area 5, please?**

20 A. Area 5?

21 Q. **Yeah, pages 9 and 10.**

22 A. Okay.

23 Q. **And is Area 5 -- let me strike that**
24 **and rephrase that.**

1 Is -- Area 5, does it fall
2 within the strip of property that is not owned by
3 Midwest Generation?

4 A. No.

5 Q. And flipping back just one page to
6 Area 4, does area -- I will wait for you to get
7 there.

8 Does Area 4 fall within the
9 strip of land that is not owned by Midwest
10 Generation?

11 A. No.

12 MS. BUGEL: Okay. I have no further
13 questions.

14 HEARING OFFICER HALLORAN: Thank
15 you, Ms. Bugel. Off the record for a minute.

16 (Whereupon, a lunch break was
17 taken.)

18 HEARING OFFICER HALLORAN: All
19 right. Back on the record. We're back from
20 lunch. It's approximately 1:10. Thank you for
21 being so prompt.

22 Ms. Bugel, housekeeping before
23 Ms. Gale's re-direct?

24 MS. BUGEL: Yes. So it's as to

1 public comment tomorrow. We have learned that
2 there may be three more people coming.

3 HEARING OFFICER HALLORAN: Three
4 more out of -- in addition to what?

5 MS. BUGEL: Initially, we had said
6 two. So we are looking at about four people
7 coming at 1:00, and I just did want to advise that
8 one of the people coming at 1:00 is the Mayor of
9 Waukegan.

10 HEARING OFFICER HALLORAN: Okay.

11 MS. BUGEL: So I just want that to
12 be transparent. In addition, we have had a
13 request for Representative Avelar out in Will
14 County. She would like to come offer comment, but
15 she cannot come at 1:00. She is requesting to
16 come in the morning tomorrow. I do not have a
17 time.

18 MS. NIJMAN: You know, Mr. Hearing
19 Officer, again, I'm struggling with this, but this
20 happened in the last -- in 2019 as well, and it
21 happened during our week. If they have public
22 comment, it should have been handled during the
23 week that they were presenting their case. Now,
24 it interrupts our case flow. It interrupts now

1 several times, apparently. Now, it's not two for
2 three minutes. Now, it's longer. This is
3 becoming -- this shouldn't have been done in our
4 week, and we may well go over then.

5 HEARING OFFICER HALLORAN: Yeah, we
6 may. I mean, it's the Board's policy to have
7 public comment, but I agree with you, Ms. Nijman,
8 that this could have been done during the
9 Complainants' case, and we were told via e-mail
10 about the two or three, and now we may have three
11 more, so I count five.

12 MS. BUGEL: Five.

13 HEARING OFFICER HALLORAN: And it's
14 three minutes a piece?

15 MS. BUGEL: Five at three minutes a
16 piece. I will note that we -- we ended before.
17 You know, and there was never an argument --

18 HEARING OFFICER HALLORAN: Yeah.

19 MS. BUGEL: -- about a 50/50 split.
20 We didn't even use a full week. We were on to
21 Midwest Gen's witnesses by lunch time.

22 MS. NIJMAN: Which is why they
23 should have been done --

24 MS. GALE: You should have done them

1 then.

2 HEARING OFFICER HALLORAN: Okay.
3 Yeah, we're still on the record. So let's not
4 talk over each other.

5 I am going to allow it, but, you
6 know -- and I believe the rules -- I haven't
7 looked at them in a while -- is it's as time
8 allows. And if need be, we will just have to
9 shorten our lunch for a day or two. I mean, I
10 don't know, but --

11 MS. NIJMAN: Is there a way to do
12 this all at once --

13 HEARING OFFICER HALLORAN: Well, as
14 part of the --

15 MS. NIJMAN: -- rather than
16 splitting up our cases?

17 HEARING OFFICER HALLORAN: Well, you
18 mean as far as bringing the other witnesses in?
19 But she doesn't know when the state rep is coming
20 in.

21 MS. NIJMAN: And so we have to stop
22 in the middle of a witness because the state rep
23 is coming?

24 HEARING OFFICER HALLORAN: Maybe so,

1 Ms. Nijman. That's the way the ball roles.

2 MS. BUGEL: I have no control over
3 the state rep's schedule.

4 HEARING OFFICER HALLORAN: I --
5 neither do I. I agree. The timeliness is not the
6 most ideal. But we will have them on. They can
7 give their three minutes, and we will see what
8 happens. We won't -- we won't mess with your --
9 whether you are doing a direct or not. We will
10 have the state rep wait for a little bit until you
11 are done, so you don't have to stop in the middle
12 of your direct or re-direct or whatnot.

13 Ms. Bugel, if she is doing a
14 cross or Mr. Abel, they can stop. But is that
15 agreed?

16 MS. BUGEL: Agreed. And I will
17 advise the state rep that she may have to wait if
18 we are in the middle of --

19 HEARING OFFICER HALLORAN: If --
20 yeah, we were in the middle of something.

21 MS. BUGEL: Yeah.

22 HEARING OFFICER HALLORAN: You know,
23 it won't be too long, but we will try to get her
24 in.

1 MS. BUGEL: Okay.

2 HEARING OFFICER HALLORAN: Or we
3 will get her in.

4 MS. NIJMAN: Are we doing any kind
5 of time limitations? We were told three minutes.

6 HEARING OFFICER HALLORAN: I think
7 it's three minutes.

8 MS. BUGEL: I will advise them that
9 they need to each keep it to three minutes.

10 MS. NIJMAN: Thank you.

11 HEARING OFFICER HALLORAN: Thank
12 you. All right. That was that housekeeping
13 matter.

14 Ms. Gale, I think you are on
15 re-direct, and Mr. Gnat, you are still under oath.

16 R E - D I R E C T E X A M I N A T I O N

17 by Ms. Gale

18 Q. Mr. Gnat, I would like you to get
19 out Gnat Book No. 2, please.

20 A. Okay.

21 Q. And can you flip to Exhibit 1504?

22 A. Okay.

23 Q. And you were asked questions about
24 the end of borings for each of these borings logs.

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Do you recall those questions?

A. Yes, I do.

Q. And -- well, I will ask this.

**Why -- and at the end of borings
for each of these logs, why did the boring end?**

A. You know, it's not put on these logs
and in a way, shame on us, but knowing this
particular effort, this was done with a Geoprobe
drilling rig, which is a technology that pounds
the sampler down, and this was because of refusal
hitting large -- larger cobbles or whatnot that
the technology just couldn't get past.

**Q. So -- and I'm sorry. So you said --
you used the term "Geoprobe." What is a Geoprobe?**

A. A Geoprobe is a drilling tool that
rather than spinning like an auger does or a
rotary-type approach, this is strictly hammering
down and hammering a core barrel down literally
with a hydraulic hammer.

**Q. And where -- and so I see on the
boring log, the first one there at the bottom it
says, "Use of rig, Geoprobe." Is that what you
mean?**

A. Yes.

1 Q. And can you turn to Boring Log SB3?

2 A. Yes.

3 Q. And do you see it says towards about
4 15 feet, "increased cobbles"?

5 A. Yes, around 10 feet down, yes.

6 Q. And then Boring Log SB4?

7 A. Yes.

8 Q. Around there, around six feet, it
9 says, "increased cobbles"?

10 A. Correct.

11 Q. And when you see cobbles, what does
12 that indicate to you?

13 A. That the material is picking up a
14 larger -- you know, so you have got different
15 sizes. And sizes are sand, gravel -- cobble is
16 the next size up, and above cobbles is a -- is a
17 boulder. So cobbles tend to be, you know, four or
18 five inches, maybe larger, eight, ten inches type,
19 and you start getting bigger, they will starting
20 going into what would be called boulders then.

21 Q. And would the boulders -- well,
22 could a Geoprobe get through a boulder?

23 A. Well, certainly -- well, cobbles --
24 depending on the cobble and the angle in which the

1 Geoprobe hits it. If it's large enough, and the
2 Geoprobe is hitting the cobble, you know, just
3 along the side, it will probably break it off or
4 should be able to angle past it, but if you
5 take -- get a large cobble and you hit it head on,
6 you may, in fact, just hit refusal. You won't be
7 able to get past that.

8 **Q. And you mentioned earlier the**
9 **Geoprobe is different than -- I think you used the**
10 **term "auger." What is an auger?**

11 A. Right, a hollow stem auger. It's a
12 different drilling method where you're actually
13 spinning down an auger, and when an auger
14 encounters a cobble-size fraction, it can quite
15 often just go along the side and spin it up the
16 side of the auger and bring it to the surface,
17 but, you know, in terms of limitations for
18 drilling methods, if you get into a big cobble --
19 into a big actual boulder field, hollow stem
20 arguers aren't the best to go through those
21 either, because those are just too big, and it
22 can't bring it up. It's going to sit on top of
23 that boulder and just turn and not be able to get
24 past it.

1 Q. And so -- but all right.

2 Well, I am going to actually
3 give to you an excerpt of Complainants'
4 Exhibit 12C. And 12C, for the record, was
5 introduced and admitted in the first hearing, and
6 the -- what we have here is an excerpt of the
7 Hydrogeologic Assessment Report prepared by
8 Patrick Engineering in February of 2011.

9 Can you turn to the -- so to the
10 first -- sorry. I guess the second page?

11 A. Yes.

12 Q. And you see it's for Monitoring Well
13 9?

14 A. Yes.

15 Q. And if you want to turn in your
16 Exhibit 2 -- excuse me -- binder 2 to
17 Exhibit 1503?

18 A. Yes.

19 Q. And 1503 is a map, right?

20 A. Yes, it is.

21 Q. So what monitoring well is on 1503?

22 A. MW-09.

23 Q. And so looking at the boring -- and
24 so in exhibit -- Complainants Exhibit 12C, is this

1 boring log Monitoring Well 9, the monitoring
2 log -- excuse me -- the monitoring well in 1503?

3 A. Yes, it is.

4 Q. Okay. So I want you to look at --
5 so this goes all the way down to 35 feet, right?

6 A. Yes.

7 Q. What's the difference?

8 A. Well, this -- this boring was done
9 with the hollow stem auger right there on the
10 drilling method. It says there a 4.25 inch ID
11 hollow stem auger, has, that signifies a 4.25-inch
12 inner diameter hollow stem auger.

13 So this is that drilling method
14 that can certainly handle cobbles left that are --
15 where if it encounters a cobble layer, it can
16 bring those cobbles up, as opposed to getting
17 stalled out on them.

18 Q. Okay. And, yeah, could you look
19 at -- in the Patrick Engineering boring log
20 Monitoring Well 9 at 11 feet?

21 A. Yes.

22 Q. What do you -- what is -- what is
23 shown at 11 feet?

24 A. Limestone fragments with wet ground

1 silty fine to course sand, dry.

2 **Q. And what do the limestone**
3 **fragments -- fragments mean to you?**

4 A. Knowing what the bedrock in the area
5 is, it's a limestone dolomite-type bedrock, and so
6 a lot of the soils and so on in this area, and
7 even the materials being used as fill being
8 brought in from offsite will include this type of
9 limestone fragment. It's provided for the
10 weathered bedrock in the area.

11 **Q. In relation to using the pounding of**
12 **a Geoprobe, and you see limestone fragment at**
13 **11 feet, what does that mean?**

14 A. That this material has fragments
15 and -- limestone fragments usually tell me it's,
16 you know, gravel size, maybe a little bit on the
17 larger size of gravel within -- within this
18 material.

19 So, you know, again, that this
20 is probably within 20 feet or so of bedrock at
21 some point. You know, that you are eventually
22 going to get close to that bedrock, you know,
23 weathered limestone fragments on top of weathered
24 bedrock.

1 Q. All right. I want to turn to -- you
2 can put that aside. Thank you.

3 And can you pull out
4 Complainants' Exhibit 248N?

5 A. Yes.

6 Q. Okay. And this is the
7 August 27th -- excuse me -- August 27, 2009
8 inspection report.

9 Mr. Gnat, after you did this
10 inspection -- well, let's turn to page
11 MWG13-15_19444.

12 A. Yes.

13 Q. Okay. After the bullet point, first
14 full paragraph where it states, "KPRG met with
15 Allied Landscaping", what was the point -- what
16 was the purpose of meeting with Allied
17 Landscape -- excuse me.

18 A. To go over the areas and to get
19 their estimate for the necessary materials and
20 labor to do the repairs that we would like them to
21 do to address these areas that were identified.

22 Q. And were the repairs made?

23 A. Yes, they were.

24 Q. And do you recall discussing them at

1 **the first hearing?**

2 A. I believe we did, and I believe I
3 generally said that we tried to -- I would get the
4 contractor out the same day that I finished the
5 inspection, get their costs, and we were trying to
6 get these repairs done within anywhere of two to
7 four weeks of the initial inspection.

8 Q. And for the record, the repair that
9 was discussed was Midwest Gen Exhibit No. 800.

10 Turning to your observations of
11 Area 2, which is on MWG13-15_19443.

12 A. Yes.

13 Q. Do you see in that Area 2
14 description where you say -- you describe the size
15 of the gully as 50 feet long, up to 4 feet deep
16 and 10 feet wide, and then you say there is
17 evidence of --

18 THE COURT REPORTER: I'm sorry?

19 BY MS. GALE:

20 Q. I'm sorry. And then you say there
21 is evidence of ash and slag in the bottom of the
22 gully, G-U-L-L-Y. When you say evidence of ash
23 and slag, what do you mean by that?

24 A. Well, when -- when I looked on the

1 sides, I didn't see any, but in the bottom of the
2 gully where you actually saw -- I saw some -- you
3 know, the exposed dirt, and so I saw some evidence
4 of some -- some ash material kind of sparkly,
5 sandy looking and some cindery material within
6 that soil in the bottom of the gully itself. So
7 that's -- that's what that was trying to describe.

8 **Q. So when you are describing what you**
9 **observe here in the ash and slag, are you saying**
10 **that it's a monofill of ash or slag?**

11 MS. BUGEL: Objection, leading.

12 HEARING OFFICER HALLORAN: All
13 right. Can you rephrase, Ms. Gale?

14 BY MS. GALE:

15 **Q. When you describe the ash and slag**
16 **at the bottom of the gully and the ash and slag**
17 **you see -- you saw in these various areas, what is**
18 **the composition of the ash and slag?**

19 A. It's part of the dirt that -- out of
20 the exposed dirt that I was seeing. So it's not
21 like it was just all solid ash or a wall of ash or
22 something. It was just dirt with -- to me that
23 was evidence of ash and cinder mixed in with it.

24 **Q. Okay. You can put that aside.**

1 Okay. And I would like you to
2 pull out Exhibit 1513 and Exhibit 1519. We are
3 going to look at those together.

4 A. Okay.

5 Q. Okay. Are you ready?

6 A. Yes.

7 Q. Okay. So, as you -- when you are
8 out here -- so these pictures of your -- are of
9 your -- as you walk along your inspection?

10 A. Yes.

11 Q. And, well, what order are the
12 pictures in?

13 A. Well, I generally -- they should be
14 in consecutive order of when I start my walk to
15 when I finish it. So, as I am walking down along
16 the embankment from -- in this particular case
17 from west to east, I would be taking pictures of
18 the embankment, but there are times also when I
19 would turn around and take a picture looking up
20 away from the -- from the river to -- you know,
21 up -- up into the property itself, so -- but I
22 would track along that way, and then on my way
23 back as I am walking more on the interior of the
24 property, then a sequence of the pictures on the

1 interior of the property.

2 Again, sometimes looking north,
3 sometimes looking south. You know, there will be
4 a time where I stop in a location, and I'll take a
5 picture north, east, south, west type.

6 **Q. Can you flip -- so in Exhibit 1519,**
7 **can you flip to MWG13-15-108292?**

8 A. Yes.

9 **Q. If you recall, you were asked**
10 **questions about this picture and other pictures**
11 **like it, and the -- and this picture not depicting**
12 **cobble?**

13 A. Yes.

14 **Q. Can you turn to Exhibit 1513 and go**
15 **to picture MWG13-15_108293?**

16 A. Yes.

17 **Q. So compared to MWG13-15_108292**
18 **compared to 108293, what are you seeing in 293?**

19 A. 293 is showing the embankment. On
20 this particular picture, you can actually make out
21 the cobbles, and some of them are bigger than
22 cobbles, boulders.

23 **Q. And I believe you said your process**
24 **of going through is you will stop, and you'll take**

1 pictures in various directions?

2 A. Yes.

3 Q. What happened here between these two
4 pictures?

5 A. Well, this is probably 292 -- or 292
6 is taken facing north and turn around and 293
7 facing south.

8 Q. And then I would like you to then
9 turn to the next photo in 13 -- excuse me -- 1519,
10 MWG13-15_108302.

11 A. Yes.

12 Q. And I believe you said that it was
13 hard to see cobbles in this photo, but if you
14 could turn in Exhibit 1513, and turn to
15 MWG13-15_108305, and comparing MWG13-15_108302 to
16 108305, what do you see?

17 A. Well, in the 305, which is a couple
18 of pictures down, so a little bit further to the
19 east along my walk, you can see the boulders
20 and -- or cobbles and so on along the bank there.
21 Well, this is -- the 302 is, you know, a little
22 bit to the west of there, and you can't see it. I
23 mean, certainly not from this angle, a fairly
24 steep bank, lots of vegetation.

1 **Q. So with lots of vegetation, what's**
2 **under that vegetation?**

3 MS. BUGEL: Objection, calls for
4 speculation.

5 HEARING OFFICER HALLORAN: Well, you
6 know, he has walked it. Evidently, this looks
7 like it was in the fall. I see a lot of leaves.
8 He can answer, if he is able.

9 BY THE WITNESS:

10 A. All right. And, again, even despite
11 what you can't see in these pictures with lots of
12 vegetation taken from a little bit further in, so
13 if I knew I was going to take this picture to
14 document for somebody that, in fact, I would see
15 boulders or cobbles there, this picture would have
16 been taken closer to the thing and focused down on
17 it specifically for that purpose.

18 That wasn't necessarily for this
19 purpose. I'm trying to document my walk. If
20 somebody says, "Rich, please document that walk
21 and with each picture take one that makes sure it
22 sees the cobbles that you see there," I would do
23 that. Certainly, what I'm looking for is not as
24 much -- cobbles aren't what's of interest to me.

1 What's of interest to me is a seep.

2 And I have no pictures of seeps,
3 because I have not seen any seeps, and so, you
4 know, I guess, here I kind of sit here, and I'm
5 trying to explain what I'm seeing. The pictures
6 were taken to document the walk, to document
7 whether or not I -- and documenting an erosional
8 feature or if I'm documenting a seep.

9 If somebody said to me from the
10 get-go, "Rich, walk, and every time you see a
11 boulder, document it," I would have lots of
12 pictures going along here, and ones where I'm not
13 standing 15 feet or 10 feet off the side of the
14 embankment with a lot of vegetation covering the
15 embankment. If you went over there and took a
16 look down, I will -- having walked this, you will
17 see cobbles.

18 BY MS. GALE:

19 **Q. And all this discussion of cobbles,**
20 **I believe you testified cobbles were part of an**
21 **indication to you of -- that there was dredging**
22 **spoil. Do you recall that testimony?**

23 A. Right. You know, and again, that's
24 just the -- knowing of the construction history

1 of -- the history of that whole canal area and how
2 all the canals in the areas were done, they were
3 ripped into rock, and to see this type of
4 materials along the sides doesn't surprise me.

5 Q. And -- but to your knowledge, are
6 cobbles the only type of river spoils that would
7 be seen?

8 A. No. Certainly there would also be
9 any of the soft sediments, the sands, silts, clay
10 or whatnot there are on top of rock as well.
11 Those all get pulled up in any type of a project
12 like that.

13 Q. Mr. Gnat, could you pull out book 3,
14 please?

15 A. Okay.

16 Q. And can you turn to Exhibits 1515
17 and 1516?

18 A. Yes.

19 Q. And Exhibit 1515 and 1516 are the --
20 just for the record, the river gauges at Peoria
21 Lock and Dam and the Kingston Mines.

22 Mr. Gnat, how often are these
23 river gauges measured?

24 A. The river gauges are measured at

1 least on a daily basis.

2 Q. And so when you look at the historic
3 crests on the bottom of each of those pages, what
4 do the historic crests tell you?

5 A. To me, that -- so on Exhibit 1515,
6 the oldest date on that is 1943 to 2019, and I
7 believe this was the date -- I'm looking further
8 up graph, created November 27, 2022. So what this
9 tells me, these are the top five with the dates
10 included of what the five highest historic crests
11 were, and this is based on daily measurements.

12 So that's -- the highest crest
13 ever was 546.57 feet on April 24th, 2013 based on
14 daily recorded measurements by the USGS and NOAA.

15 MS. GALE: Nothing further, sir.

16 HEARING OFFICER HALLORAN: Thank
17 you, Ms. Gale.

18 Ms. Bugel, re-cross?

19 MS. BUGEL: We don't have re-cross,
20 but we do have two exhibits left over from this
21 morning that we needed to make copies of.

22 HEARING OFFICER HALLORAN: Okay.

23 MS. BUGEL: And we have prepared
24 those.

1 HEARING OFFICER HALLORAN: Okay.

2 MS. BUGEL: So, yeah, just for
3 documentation, we are -- we are distributing a new
4 copy of 1518, which is a demonstrative, and it has
5 the correction that Mr. Gnat wrote on it, and the
6 addition of Area 6 on the last page.

7 MS. GALE: Wait. Area 6 is on --

8 MS. BUGEL: No. You are looking at
9 the wrong one. I was talking about --

10 MS. GALE: I see. Oh, got it.
11 Okay.

12 (Whereupon, Complainants'
13 Exhibit No. 1521 was marked for
14 identification.)

15 MS. BUGEL: And then we have also
16 distributed what is marked as a new exhibit, 1521,
17 which is the excerpt that Mr. Gnat indicated the
18 property fence line on in black marker, and that
19 one, Complainants move for the admission of 1521
20 into the record.

21 HEARING OFFICER HALLORAN: Okay. I
22 have 1521 up here? Oh, okay.

23 THE WITNESS: There is something on
24 the back of 1521 as well, which on -- that's not

1 part of what I looked at or anything.

2 MS. BUGEL: The -- what is on the
3 back of it -- because it is an excerpt from a
4 previous exhibit. What is on the back of it is
5 the -- and I believe it was 901? It was from 901,
6 and the back of it is what was on the back of 901.

7 HEARING OFFICER HALLORAN: Okay.
8 Let's take this one at a time.

9 Ms. Gale, Complainants'
10 Exhibit 1518 with the corrections as to Area 3, to
11 Area 2 -- is that the only markup you had,
12 Ms. Bugel?

13 MS. BUGEL: No. The last page has
14 Area 6 added to it. And Mr. Gnat put a black dot
15 where Area 6 is, generally.

16 HEARING OFFICER HALLORAN: All
17 right. Ms. Gale, exhibit -- demonstrative
18 Exhibit 1518?

19 MS. GALE: We would continue our
20 objection to the exhibit for the reasons we stated
21 earlier.

22 HEARING OFFICER HALLORAN: Thank
23 you. So noted. And, again, I will take it as a
24 demonstrative, 1518. There's really no

1 substantive probative, but I think it would assist
2 the Board in their decisionmaking.

3 (Whereupon, Complainants'
4 Exhibit No. 1518 was accepted
5 as a demonstrative exhibit.)

6 HEARING OFFICER HALLORAN: All
7 right. Here we go. Complainants' Exhibit 1521.
8 Ms. Gale?

9 MS. GALE: Well, the -- we are a
10 little confused, because the one that we were
11 handed earlier didn't have the second page, and
12 Mr. Gnat said he doesn't know about the second
13 page, but other -- you know, first page only.

14 MS. BUGEL: I believe the copy we
15 distributed this morning did have the second page,
16 and the reason it has the second page is it's
17 because it's an excerpt from an exhibit. So we
18 pulled it out the way -- that is the way it
19 appears. I mean, it's the page 16 as it would
20 appear in the original Exhibit 901.

21 But we are referencing --
22 obviously Exhibit 1521 is -- the focus is on page
23 15, and the marks that Mr. Gnat added for -- so
24 that the Board can see where the fence line occurs

1 at Joliet 29.

2 MS. GALE: As long as it's clear to
3 the Board that Mr. Gnat had nothing to do with the
4 other side.

5 HEARING OFFICER HALLORAN: Okay.
6 Yeah, that's all on the record. It's like déjà vu
7 all over again from five years ago as far as the
8 exhibits. We've got to make them a little
9 cleaner, but the Board is to, I guess, disregard
10 the back side, but Exhibit 1521 is admitted.
11 Thank you.

12 (Whereupon, Complainants'
13 Exhibit No. 1521 was admitted
14 into evidence.)

15 MS. BUGEL: And with that,
16 Complainants have no further questions.

17 HEARING OFFICER HALLORAN: Thank
18 you, Ms. Bugel.

19 Ms. Gale, any re-re-direct?

20 MS. GALE: No.

21 HEARING OFFICER HALLORAN: All
22 right. Mr. Gnat, it's been fun.

23 THE WITNESS: It's been a pleasure.

24 HEARING OFFICER HALLORAN: We'll go

1 off the record.

2 (Whereupon, a short break was
3 taken.)

4 HEARING OFFICER HALLORAN: All
5 right. We are back on the record. It's
6 approximately 1:46. We are going to have a panel
7 of two witnesses, which is kind of an anomaly for
8 me, but it's been agreed to between the parties.

9 Gentlemen, if you could raise
10 your right hand, Kari will swear you in.

11 (Whereupon, the witnesses,
12 Mr. Dorgan and Mr. Maxwell,
13 were duly sworn.)

14 HEARING OFFICER HALLORAN: Thank
15 you. Ms. Nijman?

16 MS. NIJMAN: Thank you.

17 HEARING OFFICER HALLORAN: I'm
18 ready.

19 WHEREUPON:

20 D O U G L A S D O R G A N

21 and

22 M I C H A E L M A X W E L L

23 called as witnesses herein, having been first duly
24 sworn, deposeth and saith as follows:

1 D I R E C T E X A M I N A T I O N

2 MS. NIJMAN: So, again, for the
3 record, we have two witnesses from Weaver
4 Consulting Group, Mr. Douglas Dorgan and
5 Mr. Michael Maxwell with agreement as a panel.

6 Mr. Dorgan, starting with you,
7 would you describe current employment for both you
8 and Mr. Maxwell?

9 MR. DORGAN: Mr. Maxwell and I are
10 both employed by Weaver Consultants Group. We are
11 an environmental, civil and geotechnical
12 engineering consulting firm.

13 MS. NIJMAN: And tell me more about
14 your respective role at Weaver.

15 MR. DORGAN: So I joined Weaver
16 Consultants in 1995. In 2000, I became a
17 principal in the firm. In 1990 -- or in 2017, I
18 became the firm's co-president. I still serve in
19 that capacity. Throughout my time with Weaver, I
20 have been doing primarily environmental
21 consulting, but I have done a -- quite a few other
22 things as well.

23 I have led our environmental
24 practice group. I've led our civil survey and

1 geotechnical group, and have been very involved in
2 supporting the other business units within the
3 company as a whole.

4 MS. NIJMAN: What was the role of
5 Weaver Consulting Group -- and can we just refer
6 to it as Weaver?

7 MR. DORGAN: Certainly.

8 MS. NIJMAN: What was Weaver's role
9 in this matter?

10 MR. DORGAN: We were initially asked
11 to consider the Board's opinion, both the 2019 and
12 2020 opinion with respect to what would be the
13 appropriate remedy and relief with respect to the
14 findings from the earlier phase of the hearing for
15 the four Midwest Generation stations that have
16 been the subject of this matter.

17 MS. NIJMAN: And would you explain
18 how you and Mr. Maxwell divvied up, divided up
19 that project?

20 MR. DORGAN: So Mike and I have
21 collaborated quite closely on the project as a
22 whole. Obviously, there was a lot of historic
23 information to review. We have both been very
24 involved in looking at the record as a whole.

1 Where we probably deviated was
2 Mike -- Mr. Maxwell ended up focusing his
3 attention more on the Will County and Joliet
4 Stations, whereas I focused more on Waukegan and
5 the Powerton Stations. Mike took the lead on some
6 of the technical analysis as well, working with
7 some of our support team.

8 MS. NIJMAN: Do you have a binder in
9 front of you?

10 MR. DORGAN: Yes, I do.

11 MS. NIJMAN: Do you have that? And
12 it's marked Weaver. Would you turn to the first
13 tab of your binder?

14 And it is an excerpt from your
15 expert report, which we will mark in a minute. So
16 it's marked -- the CVs are identified and marked
17 as Excerpt of Exhibit 1701.

18 Do you see that?

19 (Whereupon, Respondent's Exhibit
20 No. 1701 was marked for
21 identification.)

22 MR. DORGAN: Yes, I do.

23 MS. NIJMAN: Turning to the first
24 page, is this your CV?

1 MR. DORGAN: Yes, it is.

2 MS. NIJMAN: Is the employment
3 history and the certifications listed on the left
4 of your CV, is that still correct?

5 MR. DORGAN: Yes, it is.

6 MS. NIJMAN: And in that box on the
7 left of your CV on the page with your picture on
8 it, you have a title called, "Fields of
9 Expertise."

10 Do you see that?

11 MR. DORGAN: Yes, I do.

12 MS. NIJMAN: Would you tell me about
13 your experience with brownfields redevelopment?

14 MR. DORGAN: So this callout box
15 here is intended to be a summary of my general
16 areas of focus throughout my really career and
17 certainly my time while at Weaver. In particular,
18 I have had a very concentrated focus in the area
19 of brownfields redevelopment. That's been kind of
20 a specialty of mine for quite a few years.

21 In brownfields redevelopment, we
22 are looking at primarily older, industrial
23 properties that are going through some form of
24 closure or redevelopment, and the purpose is to

1 evaluate those properties with respect to the
2 long-term uses and whether there is any legacy
3 environmental concerns with these properties and
4 how that might influence the redevelopment of and
5 the future uses of the properties that are
6 undergoing that redevelopment.

7 MS. NIJMAN: In your view, are the
8 four Midwest Gen stations at issue here
9 brownfields?

10 MR. DORGAN: I would consider them
11 brownfields. While they may not necessarily
12 going -- be going through a specific
13 redevelopment, they certainly have a long history
14 of industrial use. So they would -- they would
15 fit into that type of classification.

16 MS. NIJMAN: Next on your list in
17 your CV is the category of Remediation, Design,
18 and Cost Modeling. Would you describe your
19 experience there?

20 MR. DORGAN: Oftentimes as an
21 outgrowth of the brownfields work, but not always,
22 we will end up evaluating properties with respect
23 to how to manage the environmental conditions that
24 are characterized. We oftentimes do that using

1 risk-based strategies, sometimes to preset
2 regulatory-driven closure standards, and I have
3 been involved in all phases of the remediation,
4 both the investigation side, and then the remedial
5 design, the planning for the remedial
6 implementation in terms of putting together
7 technical and general specifications.

8 I've been involved in the
9 bidding process; contractor review and selection,
10 and ultimately contractor oversight, and then as
11 the remediation is completed, we are doing a lot
12 of the engineering oversight of that, and then the
13 regulatory reporting to the appropriate regulatory
14 agency.

15 MS. NIJMAN: You mentioned remedial
16 measures. Does that -- when you assess a remedial
17 measure, do you consider different types of
18 remedies that might be appropriate?

19 MR. DORGAN: Certainly. And it can
20 vary, depending upon -- depending upon which
21 regulatory program you are working in. When we
22 are looking at brownfields, we tend to look at it
23 more from the state voluntary cleanup type of a
24 strategy. This isn't a CERCLA site. It's not a

1 not RCRA site. So those standards don't
2 necessarily apply. And in a situation with a
3 typical brownfield in Illinois, we would do more
4 of an alternatives evaluation. What are the
5 various options we might have, and then what is
6 technically feasible and economically practicable
7 to implement?

8 MS. NIJMAN: You said just a minute
9 ago that this is isn't a RCRA or CERCLA site.

10 Were you referring to one
11 station, or all stations?

12 MR. DORGAN: I was referring to all
13 four stations.

14 MS. NIJMAN: Tell me about the
15 different type of media you work with in the
16 brownfields work.

17 MR. DORGAN: Pretty much runs the
18 gamut, including groundwater, surface water,
19 sediments, surface waters. We look at --
20 oftentimes, we even get into air sampling, in
21 terms of perimeter air sampling when that is
22 called for.

23 MS. NIJMAN: And is your experience
24 in Illinois?

1 MR. DORGAN: No. I have worked all
2 around the country.

3 MS. NIJMAN: How much of your
4 experience is in Illinois versus other parts of
5 the country?

6 MR. DORGAN: I would say the
7 majority of it has been in Illinois, but I have
8 exposure to a number of other states and other
9 programs, both at the federal and state level.

10 MS. NIJMAN: Can you estimate how
11 many design projects you have worked on in your
12 career?

13 MR. DORGAN: It's been in the
14 hundreds.

15 MS. NIJMAN: And I should say
16 remedial design projects.

17 MR. DORGAN: That would be the same.

18 MS. NIJMAN: Also, on your CV you
19 list a groundwater impact assessment. What do you
20 mean there?

21 MR. DORGAN: So in a groundwater
22 impact assessment, we are looking at, you know,
23 have there been releases at a facility that may
24 have impacted groundwater, and if so, what's the

1 condition of the groundwater? What are the
2 groundwater units that are involved? What's the
3 plume condition? Oftentimes we evaluate
4 downgradient receptors that may come in contact
5 with groundwater impacts.

6 MS. NIJMAN: Does an analysis of
7 risk have anything to do with that -- with that
8 groundwater impact assessment?

9 MR. DORGAN: Yes, and it kind of
10 dovetails into that next point there, which is the
11 risk-based corrective action.

12 So we have instances where we
13 are driven towards certain outcomes based upon the
14 regulatory framework. In others, we are working
15 within a context where a risk-based corrective
16 action, RBCA, is more appropriate. We are looking
17 there at what are the concentrations? What are
18 the pathways? What are the receptors that may
19 come in contact with those pathways?

20 And ultimately, we back into our
21 remedy by concentrating first on what our receptor
22 population and risk is to that receptor
23 population. So that's kind of what I'm referring
24 to there.

1 MS. NIJMAN: Is that an
2 Illinois-based concept?

3 MR. DORGAN: Illinois certainly
4 follows. This is more guidance that came out at
5 the federal level under the risk-based corrective
6 action.

7 MS. NIJMAN: On this issue of
8 risk-based remediation in Illinois, we have
9 bandied about in other testimony the word, "TACO".
10 You are familiar with that word?

11 MR. DORGAN: The tiered approach to
12 corrective action objectives?

13 MS. NIJMAN: And what is the first
14 tier of this tiered approach?

15 MR. DORGAN: So in Illinois, the
16 TACO program has three tiers. The first tier are
17 a set of default criteria, that you can evaluate
18 site conditions against. If you fall below the
19 default criteria based upon your intended land
20 use, you have no further to go. You have
21 demonstrated that there is no risk, and therefore,
22 the conditions are already managed.

23 MS. NIJMAN: And do the TACO Tier I
24 standards provide a cleanup standard?

1 MR. DORGAN: Yes, they do.

2 MS. NIJMAN: You mentioned
3 experience with remediation sites. Do you work
4 with the -- well, we will just take Illinois --
5 Illinois agencies when you plan a remediation of a
6 brownfield site?

7 MR. DORGAN: Yes, we -- I often
8 have.

9 MS. NIJMAN: In the course of
10 remediation, what happens if you disagree with an
11 agency?

12 MR. DORGAN: Typically, there will
13 be quite a bit of back and forth as you try to
14 strike that balance in terms of bringing the
15 Agency to a comfort level with your overall
16 approach and strategy and the information that you
17 have, and it's not uncommon you made submittals,
18 you get a set of comments back, you respond to
19 those comments, maybe you get further comments,
20 and typically you'll eventually drive to an
21 approval on whatever it is that you are seeking
22 the approval for.

23 MS. NIJMAN: Have you served as an
24 expert witness in the past?

1 MR. DORGAN: I have.

2 MS. NIJMAN: Have your opinions ever
3 been rejected by a judicial body?

4 MR. DORGAN: Not that I am aware of.

5 MS. NIJMAN: In this case, have you
6 had the opportunity to review reports filed by
7 Mr. Quarles?

8 MR. DORGAN: Yes, I have.

9 MS. NIJMAN: And who is Mr. Quarles?

10 MR. DORGAN: My understanding is
11 Mr. Quarles is the expert retained by the
12 Plaintiffs as their expert.

13 Sorry. We're just missing a
14 binder.

15 MS. NIJMAN: Do you recall reading
16 Mr. Quarles' rebuttal report?

17 MR. DORGAN: Yes, I do.

18 MS. NIJMAN: Do you recall
19 Mr. Quarles commenting on your qualifications?

20 MR. DORGAN: Yes, he did.

21 MS. NIJMAN: And he questioned your
22 experience with remediations?

23 MR. DORGAN: Yes, with the
24 remediation, and I think with respect to

1 experience within the CCR framework as well.

2 MS. NIJMAN: Is that surprising to
3 you?

4 MR. DORGAN: Not necessarily.
5 Certainly, when you have differences of opinion, I
6 suppose there is an instance where you may choose
7 to question qualifications, but that's not
8 something I would do.

9 MS. NIJMAN: Had you ever met
10 Mr. Quarles before the hearing -- this hearing in
11 May?

12 MR. DORGAN: No, I had not.

13 MS. NIJMAN: And you have never
14 worked with him before?

15 MR. DORGAN: I have not.

16 MS. NIJMAN: Would you detail for us
17 your experience with CCR?

18 MR. DORGAN: I have been working --
19 well, with coal combustion byproducts for many
20 years predating the CCR rules. Any number of
21 project sites that I have been involved with have
22 had coal combustion residues as a component of the
23 site conditions.

24 But I also do have experience

1 working on sites that are exclusively CCB,
2 including a large landfill in northwest Indiana
3 that I have worked on for many years. I have also
4 done a number of CCR closures of regulated units,
5 two recent ones that we have just done in New
6 Jersey.

7 MS. NIJMAN: Have you worked on CCR
8 to the extent that it is also a part of another
9 site?

10 MR. DORGAN: Yes. CCR, you tend to
11 run into it especially here in the Chicago area.
12 You run into it pretty frequently, especially as
13 part of the Chicago fill materials that we're
14 dealing with. Pretty much any site we do in the
15 city involves Chicago fill materials, and CCRs are
16 often a component of the materials we are dealing
17 with.

18 MS. NIJMAN: And to be clear then,
19 we're not -- we're -- how are you referring to
20 CCRs when you are talking about Chicago fill
21 material?

22 MR. DORGAN: I'm referring to it as
23 just one of the constituents making up a matrix
24 that we're managing.

1 MS. NIJMAN: Like a cinder or --

2 MR. DORGAN: It could be cinder. It
3 could be combusted materials. Historically, many
4 of the buildings downtown were heated with coal,
5 and so you run into coal ash pretty frequently
6 when you are dealing with city sites.

7 MS. NIJMAN: And going back to one
8 of your comments about site remediations, are you
9 familiar with the term "compliance commitment
10 agreement"?

11 MR. DORGAN: Yes, I am.

12 MS. NIJMAN: How is that part of a
13 site remediation?

14 MR. DORGAN: A compliance commitment
15 agreement is generally a voluntary structure that
16 you enter into with the regulatory agency, in this
17 case, the IEPA. That spells out the steps you are
18 going to take to remedy site conditions that are
19 deemed to warrant that. It's a step-by-step
20 process that outlines the individual, as the term
21 says, commitments, that the owner is making to
22 implement to try to address the concerns that have
23 been identified. And those are usually spelled
24 out in quite a bit of detail.

1 MS. NIJMAN: Were you present during
2 Mr. Quarles' testimony in May?

3 MR. DORGAN: Yes, I was.

4 MS. NIJMAN: Did you hear
5 Mr. Quarles say that he thought the CCA was
6 intended to avoid compliance?

7 MR. DORGAN: I did hear him say
8 that.

9 MS. NIJMAN: Do you agree with that
10 characterization?

11 MR. DORGAN: No. When you enter
12 into a compliance commitment agreement, you are
13 taking proactive steps. You are doing it
14 voluntarily. You are doing it in consultation
15 with the regulatory agency. You are agreeing on
16 the proposed course of action. The Agency is
17 agreeing with you, and you are committing to
18 certain follow-up actions.

19 So I -- I don't see something
20 that is intending to avoid in -- compliance. I
21 think it's intended to create a framework by which
22 you can demonstrate compliance.

23 MS. NIJMAN: Mr. Maxwell, turning to
24 you for a moment.

1 If you continue on what was Tab
2 1 in your binder, after Mr. Dorgan's CV, is that
3 your CV?

4 MR. MAXWELL: Yes, it is.

5 MS. NIJMAN: And is your employment
6 history and education on your CV still accurate?

7 MR. MAXWELL: The one item that I
8 did want to update was I was recently licensed in
9 the State of Wisconsin as a licensed professional
10 geologist. So with that addition, that listing of
11 education, certifications is accurate.

12 THE COURT REPORTER: Could you speak
13 into the mic a little bit?

14 MR. MAXWELL: Oh, I'm sorry.

15 MS. NIJMAN: Better?

16 THE COURT REPORTER: Thank you.

17 MS. NIJMAN: And what is your --
18 yeah, I think you were tilting so we could see
19 past Kari.

20 THE COURT REPORTER: Sorry.

21 MS. NIJMAN: No. Not at all.

22 What -- and looking at your
23 professional history, what is your role at Weaver?

24 MR. MAXWELL: So I serve as the

1 Chicago Environmental Practice Group operations
2 manager, and we have got a team of 10 to 12
3 geologists and engineers, that -- work in -- in
4 the Chicago office, and so I assist with -- with
5 managing that group.

6 MS. NIJMAN: And what is your
7 experience with old industrial properties or
8 brownfields, as we have been referring to them?

9 MR. MAXWELL: Yeah. So I actually
10 began my career in -- at Weaver in 1996, which was
11 the first year that the site remediation program
12 and TACO program was promulgated. So I started at
13 an interesting time in our industry, and have been
14 able to learn the ropes, if you will, of the SRP
15 and TACO program really right from the beginning
16 of my career.

17 So I have worked on -- the focus
18 of my practice has been Illinois and Indiana, and
19 have had opportunity to work on probably in the
20 low hundreds of numbers of what will be considered
21 brownfields site investigations, and many cases
22 they lead to evaluation of remediation, and
23 ultimately remediation.

24 MS. NIJMAN: And similar to

1 Mr. Dorgan, what is your experience with designing
2 a remedy for a site?

3 MR. MAXWELL: Yeah. So, again,
4 having been involved in many, many brownfields,
5 remedy evaluation is sort of a fundamental aspect
6 of assessing brownfields. The process is to
7 assess, to use that information and that data to
8 try to design a -- the proper remedy that is going
9 to be protective of human health and the
10 environment based upon the data that has been
11 collected.

12 And so there is a process that
13 goes through where certain -- certain technologies
14 are deemed more practicable and feasible than
15 others, and there is a process that gets executed
16 where you ultimately decide on what's best for
17 each individual site based on the site
18 characteristics, and based on the regulator
19 program as well.

20 MS. NIJMAN: Is that what you and
21 Mr. Dorgan did for the four Midwest Generation
22 stations?

23 MR. MAXWELL: That was the general
24 process that we undertook, yes, as it relates to

1 identifying the appropriate remedy.

2 MS. NIJMAN: Have you dealt with CCR
3 as a component of remedies you've developed?

4 MR. MAXWELL: I have.

5 MS. NIJMAN: What -- can you explain
6 that further?

7 MR. MAXWELL: Yep, yep. So, I guess
8 in a couple of different aspects. The first would
9 be, as Mr. Dorgan mentioned, cinders and ash and
10 coal ash are commonly found in almost any site
11 here in the city that we investigate, because of
12 the historical Chicago fire. So those -- those
13 materials are encountered just as a general course
14 of investigating sites here in the city.

15 And then, secondly, there has
16 been a -- several coal combustion residual
17 landfills that are permitted under the different
18 regulations, different than brownfield
19 regulations, permitted under state regulations for
20 industrial waste landfills or the federal CCR
21 regulations that were promulgated in 2015.

22 MS. NIJMAN: Have you also had an
23 opportunity to review Mr. Quarles' reports in this
24 matter?

1 MR. MAXWELL: Yes, I have.

2 MS. NIJMAN: Did you note whether
3 Mr. Quarles had a discussion about your
4 qualifications?

5 MR. MAXWELL: Yep. I did notice
6 that he commented on my qualifications.

7 MS. NIJMAN: And prior to this
8 matter, had you ever met Mr. Quarles?

9 MR. MAXWELL: I have not, no.

10 MS. NIJMAN: And have you ever
11 worked with Mr. Quarles?

12 MR. MAXWELL: I have not, no.

13 MS. NIJMAN: Do you recall what
14 concerns Mr. Quarles raised about your
15 qualifications?

16 MR. MAXWELL: He was concerned that
17 my -- that a groundwater monitoring program that I
18 was involved -- that I helped design was rejected
19 by the regulator.

20 MS. NIJMAN: And was that right?

21 MR. MAXWELL: Absolutely not. As
22 Mr. Dorgan mentioned, the -- this type of a
23 process where you are satisfying a particular
24 regulation on behalf of a client is a situation

1 where there is oftentimes give and take between
2 a -- the regulator and the consultant in this
3 case. And so that was the case in this particular
4 instance. There was a tactical matter that needed
5 to be resolved, and we ultimately resolved that,
6 and the groundwater monitoring program that Weaver
7 designed at this particular site is actually in
8 play today and is being used to help monitor this
9 particular site.

10 MS. NIJMAN: How many groundwater
11 monitoring systems do you think you have installed
12 in your career?

13 MR. MAXWELL: If you count the
14 brownfields, because the brownfields are, you
15 know, less formal and different regulations, many
16 dozens of groundwater monitoring systems at both
17 brownfield sites and sites that are under
18 different -- different regulations in terms of CCR
19 and solid hazardous waste landfills as well.

20 I think that's an important
21 point, too, because the groundwater monitoring
22 regulations under the CCR rules are mirrored after
23 the Subtitle D and Subtitle C groundwater
24 monitoring regulations for landfills that were --

1 that have been in place since the mid-90s.

2 So there is -- there is a lot of
3 overlap there, and the CCR rules just came to be
4 in 2015, but I have got experience dating back to
5 the mid-90s in terms of designing groundwater
6 monitoring programs.

7 HEARING OFFICER HALLORAN:

8 Mr. Maxwell, could you please keep your voice up?

9 It's getting --

10 MR. MAXWELL: I will.

11 HEARING OFFICER HALLORAN: -- very

12 soft. Thank you.

13 MR. MAXWELL: Sure.

14 (Whereupon, a discussion was had
15 off the record.)

16 MS. NIJMAN: We were talking about
17 groundwater monitoring systems. Is it common then
18 to -- for those kinds of groundwater monitoring
19 systems that you have installed to get adjustments
20 over time?

21 MR. MAXWELL: It absolutely is.

22 Groundwater monitoring -- a groundwater monitoring
23 system is -- it's a dynamic system. It's complex.
24 Groundwater is constantly moving, constantly

1 flowing, and as additional information is
2 collected, it's very common for the system to be
3 adjusted based upon new information that might be
4 collected during the course of the program.

5 So in the particular instance
6 that Mr. Quarles was commenting on, we had -- only
7 had a couple of data points had been collected out
8 of the minimum of eight, and so during the course
9 of finishing out the minimum of eight data points
10 collection, additional information did come to
11 light that did impact how the -- how the comment
12 with the regulator ultimately was resolved.

13 MS. NIJMAN: And you mentioned
14 that -- in that particular matter that your
15 groundwater monitoring system is still being used
16 today?

17 MR. MAXWELL: To my knowledge, yes.

18 MS. NIJMAN: Is that -- who is doing
19 the monitoring?

20 MR. MAXWELL: There is another
21 consultant that this client did bring in to
22 perform the regular day-to-day monitoring. Weaver
23 was hired to essentially do the initial
24 hydrogeologic investigation and install the

1 initial network, design the initial network,
2 collect the minimum of eight groundwater
3 monitoring data points.

4 But then after that initial work
5 was done, Weaver does not have offices down in
6 this particular part of the state, and so the
7 client opted to go with a consultant that was
8 local in order -- it was a business decision,
9 because Weaver wasn't -- wasn't present in that
10 local market.

11 MS. NIJMAN: And the -- then the
12 local consultant continued the monitoring of the
13 wells that you had installed?

14 MR. MAXWELL: That's right.

15 MS. NIJMAN: Okay. I would move to
16 qualify Mr. Dorgan and Mr. Maxwell as experts in
17 site remediation for this matter.

18 HEARING OFFICER HALLORAN: Mr. Abel?

19 MR. RUSS: Yeah. I have no
20 objection.

21 HEARING OFFICER HALLORAN: So
22 qualified. Thank you.

23 MS. NIJMAN: If you would turn back
24 to your binder at tab 2. And I will show you what

1 has been marked for identification as
2 Exhibit 1701. And if you would turn to Appendix B
3 of this report. Appendix B is the list of
4 references. It comes right after your CV.

5 MR. DORGAN: 81497?

6 MS. NIJMAN: Thank you. Does this
7 Appendix B list many of the documents that you
8 cite in your report, Mr. Dorgan?

9 MR. DORGAN: Yes, it is.

10 MS. NIJMAN: Are there other
11 documents that you relied on or use that are not
12 cited here?

13 MR. DORGAN: There are others that
14 aren't specifically referenced here, but are
15 referenced in our document in the report itself,
16 and then, of course, there has been a number of
17 documents generated since this was created that
18 wouldn't have been referenced at the time this
19 report was published.

20 MS. NIJMAN: On the last page of
21 this list of references, the second to last item
22 is, "Seymour, John, 2015 July Midwest Gen
23 Exhibit 903 Expert Report of John Seymour, P.E."

24 Do you see that?

1 MR. DORGAN: Yes, I do.

2 MS. NIJMAN: Who is Mr. Seymour?

3 MR. DORGAN: Mr. Seymour, to my
4 understanding, was an expert that testified on
5 behalf of Midwest Generation in the earlier phases
6 of this matter.

7 MS. NIJMAN: Why is -- why did you
8 review his report?

9 MR. DORGAN: His report helped to
10 outline quite a bit of the historical record that
11 had been generated up until that time. It
12 provided both the historical review of each of the
13 four stations, but it also outlined some of the
14 information that had been exchanged as part of the
15 technical analysis of the sites on behalf of
16 Mr. Seymour.

17 MS. NIJMAN: Do you recall if
18 Mr. Seymour did a trend analysis?

19 MR. DORGAN: I believe he did
20 perform some trend analysis that was referenced in
21 his document.

22 MS. NIJMAN: And do you recall if
23 Mr. Seymour performed a risk assessment?

24 MR. DORGAN: He did, yes.

1 MS. NIJMAN: Do you recognize the
2 name, Mr. Kunkel?

3 MR. DORGAN: Yes, I do.

4 MS. NIJMAN: I'm going to refer you
5 to the third page of your references where you
6 list on pages 3 and 4, the third or fourth pages,
7 a series of transcripts. Do you see that,
8 Illinois Pollution Control Board --

9 MR. DORGAN: Oh, yes, I do.

10 MS. NIJMAN. -- transcripts? Now,
11 what were those transcripts of?

12 MR. DORGAN: I believe these were
13 transcripts that were created as part of creation
14 of the record in the earlier phase of this matter.

15 MS. NIJMAN: Do you recall reviewing
16 testimony of someone named Mr. Kunkel or
17 Dr. Kunkel?

18 MR. DORGAN: Yes, I do.

19 MS. NIJMAN: Who is Dr. Kunkel?

20 MR. DORGAN: I believe Dr. Kunkel
21 was an expert retained by the Plaintiffs as part
22 of the first phase of this matter.

23 MS. NIJMAN: Okay. Take a little
24 side jaunt here for a second. And you heard

1 Mr. -- and you were here during the May hearing
2 you already mentioned, correct?

3 MR. DORGAN: That's correct.

4 MS. NIJMAN: And you heard Mr. Gnat
5 talk about the difference between filtered versus
6 non-filtered sample results. Do you remember
7 that --

8 MR. DORGAN: I do.

9 MS. NIJMAN: -- discussion? And
10 what did -- what do you recall?

11 MR. DORGAN: I recall that it gets
12 complicated in terms of the various analytical
13 requirements with respect to the CCAs, the federal
14 CCR rules and the state CCR rules, and so at these
15 stations, both filtered and non-filtered or
16 dissolved samples have to be collected for each of
17 the constituents.

18 MS. NIJMAN: Do you agree -- well,
19 is there essentially no difference at this site
20 between the filtered versus non-filtered?

21 MR. DORGAN: For the --

22 MR. RUSS: Objection. Leading
23 question.

24 HEARING OFFICER HALLORAN: Rephrase,

1 Ms. Nijman. Thank you.

2 MS. NIJMAN: Do you recall what
3 Mr. Gnat said, whether there is a difference
4 between filtered versus non-filtered sample
5 results for total dissolved solids?

6 MR. DORGAN: I believe his testimony
7 was that they are largely the same, very little
8 difference between the two.

9 MS. NIJMAN: Do you agree with that?

10 MR. DORGAN: I do.

11 MS. NIJMAN: You mentioned that you
12 have also looked at additional materials since
13 your report was issued in 2020. What additional
14 information has become available to you?

15 MR. DORGAN: Well, as Mr. Gnat
16 testified, there has been quite a bit of ongoing
17 work that has been done at each of the four
18 stations pursuant to the federal and state and
19 even the CCR requirements and the CCAs. There has
20 been quite a bit of additional groundwater data
21 collected. There have been alternate source
22 demonstrations prepared. There have been closure
23 plans prepared, permit documents prepared, and
24 then there has been some additional newly

1 generated information that has come to our
2 attention with respect to at least one of the
3 stations.

4 MS. NIJMAN: And you also listened
5 to the hearing, you mentioned?

6 MR. DORGAN: Yes, I did.

7 MS. NIJMAN: I think you mentioned
8 new rules that have been proposed, did you, in
9 your listing?

10 MR. DORGAN: No. I mentioned the
11 current CCR, both the federal and state and the
12 CCA obligations. What you may be referring to are
13 the -- there is a state docket for regulation of
14 historic fill, ash fill areas, and now there is a
15 pending federal proposal that has hit the federal
16 register here relatively recently that's -- will
17 provide guidance what happens in some instances in
18 the future.

19 MS. NIJMAN: Those are the pending
20 proposed -- or the proposed rules for historic
21 landfills? Is that what you are referring to?

22 MR. DORGAN: Yes.

23 MS. NIJMAN: You were not -- were
24 you asked to perform a detailed review of the

1 materials that were submitted pursuant to the
2 federal or state CCR rules?

3 MR. DORGAN: No, we have not.

4 MS. NIJMAN: So how did those
5 submittals fit within your decisionmaking for
6 remedy?

7 MR. DORGAN: It demonstrated that
8 the steps needed to continue complying with the
9 federal and state CCR requirements are ongoing.
10 They just demonstrate the commitment to continuing
11 to carry forward with meeting those regulatory
12 obligations, and we feel that the continued
13 consistency of application of those regulations
14 was material to the way in which we evaluated the
15 conditions at the four stations.

16 MS. NIJMAN: And as to the pending
17 new historic fill rules, how do those pending new
18 rule or proposed -- I should say -- proposed new
19 rules impact your analysis in this matter?

20 MR. DORGAN: Well, we anticipate
21 that these, both state and federal rules, when
22 they are eventually promulgated will apply at
23 least in some instances to various areas of the
24 station, and when those rules are promulgated, we

1 would anticipate based upon the history of Midwest
2 Gen continuing to work within the current
3 regulatory framework, that they would apply those
4 as well, and do what is necessary to comply with
5 them.

6 MS. NIJMAN: We just heard from
7 Mr. Gnat who talked about whether there might be
8 seeps at the -- first of all, how do you define a
9 seep?

10 MR. DORGAN: Typically, a seep would
11 be a location where a liquid that would be
12 contained within a waste material is finding a
13 preferential migration pathway that it eventually
14 ends up coming to the land surface, and usually
15 exhibits either wet conditions and sometimes stain
16 conditions, depending upon the material that the
17 water is emanating from.

18 MS. NIJMAN: And did you -- what did
19 you hear Mr. Gnat say about whether there were --
20 whether he saw seeps at any of the four stations?

21 MR. DORGAN: I believe his testimony
22 was that he has looked for and had the opportunity
23 to observe for the presence of seeps and has not
24 seen any at any of the four stations.

1 MS. NIJMAN: Did that help inform
2 your opinions in this case as well?

3 MR. DORGAN: Yes, it did.

4 MS. NIJMAN: Because we have taken
5 you out of order, before Ms. Shealey could
6 testify, I'm going to ask you about your knowledge
7 of the current status of the -- each of the four
8 stations that Ms. Shealey would have otherwise
9 testified to.

10 Are you aware of the current
11 status of the stations?

12 MR. DORGAN: Generally, yes.

13 MS. NIJMAN: What is happening at
14 Joliet 29, to your knowledge?

15 MR. DORGAN: So Joliet is
16 anticipating -- they have ceased burning coal a
17 number of years ago. They have been burning
18 natural gas, but it's my understanding that that's
19 likely to end sometime in the current calendar
20 year.

21 MS. NIJMAN: And as to Will and
22 Waukegan?

23 MR. DORGAN: Those both are ceased
24 burning coal as of last year, and it's my

1 understanding that is intended to continue.

2 MS. NIJMAN: And does the -- does
3 that status of those facilities inform your
4 opinions?

5 MR. DORGAN: It does. It's one more
6 element of our overall evaluation. You know, it
7 tells us that there is not going to be an ongoing
8 source of CCR at these properties, and that
9 certainly is a variable that we would consider.

10 MS. NIJMAN: Back to your expert
11 report at the second tab in your binder, if you
12 would look at page 4 of your report, Section 1.3
13 and in the second full paragraph in Section 1.3,
14 did you have a correction you wanted to make on
15 the record here?

16 MR. DORGAN: Yes. I believe we have
17 a reference there under the -- towards the bottom
18 of it, where it references 12(d). I believe we
19 made an error there in how we referenced that.

20 MS. NIJMAN: So the parenthesis says
21 (open dumping...) after 12(d). Should that be
22 somewhere else?

23 MR. DORGAN: That's correct. It
24 would be after 21(a) or -- yeah.

1 MS. NIJMAN: So, I'm sorry. The
2 parenthesis was just put in the wrong place?

3 MR. DORGAN: Yes, that's correct.

4 MS. NIJMAN: Now, in your expert
5 report, you have -- and you mentioned it earlier.

6 You considered the Board's
7 2020 -- the Illinois Pollution Control Board's
8 2020 revised opinion or revised interim opinion.
9 Do you recall mentioning that?

10 MR. DORGAN: Yes.

11 MS. NIJMAN: And that opinion --
12 what did that opinion address, to your
13 recollection?

14 MR. DORGAN: Well, as we referenced
15 in our report, I think the most material aspect of
16 that update to their opinion was that it
17 recognized that the GMZs that had been established
18 at three of the four stations remained operative,
19 that they had not been closed out.

20 MS. NIJMAN: And we have done this
21 with other witnesses, but could you briefly
22 describe a GMZ?

23 MR. DORGAN: A GMZ is a regulatory
24 framework by which the Agency accepts that there

1 is a zone of groundwater on a property that is
2 being managed through some sort of remedial
3 program, and that it basically recognizes that
4 there could be exceedances of relevant groundwater
5 standards within that zone, which would not be --
6 constitute -- which would not constitute a
7 violation as long as you are continuing to comply
8 with the requirements of the GMZ.

9 MS. NIJMAN: Does implementing a GMZ
10 in Illinois, require some sort of action, active
11 action, prior to getting a GMZ?

12 MR. DORGAN: It does, and, in fact,
13 if you look back at the CCAs, the CCAs had a list
14 of commitments that Midwest Gen had to comply with
15 to address certain conditions at each of the four
16 sites. There is quite a bit of overlap, a little
17 bit of uniqueness as well, and that as long as
18 they complied with those, they could then apply
19 for and have a GMZ approved, which is what they
20 ultimately did. And, of course, as part of the
21 GMZ, there is the obligation for ongoing
22 monitoring of the groundwater. They have to
23 continue to monitor the groundwater under the CCA
24 in order to maintain the GMZ.

1 MS. NIJMAN: So is a GMZ alone a
2 remedy?

3 MR. DORGAN: No. A GMZ is an
4 acknowledgment of a remedy being implemented to
5 address the groundwater conditions.

6 MS. NIJMAN: What is your experience
7 dealing with GMZs in Illinois?

8 MR. DORGAN: We have had other sites
9 that have fallen -- used the GMZ in a similar
10 fashion to allow for the time to both evaluate and
11 remedy impacted groundwater conditions.

12 MS. NIJMAN: Can you give us an
13 example of something that comes to mind or a site
14 that comes -- a situation that comes to mind in
15 use of a GMZ?

16 MR. DORGAN: We have had -- we have
17 had Illinois brownfield sites where we ended up
18 recognizing the presence of a groundwater impact.
19 We -- similar to what occurred here, we went in
20 and undertook our remediation. We saw that the
21 remediation was going to take time, applied for
22 GMZs, had them approved, and then with that, we
23 have to file an environmental land use control,
24 which as Mr. Gnat testified, is a document that

1 actually attaches to the deed so that any current
2 and future landowner understands that those
3 conditions which preclude the use of groundwater
4 are present.

5 MR. MAXWELL: Could I build on that
6 just for a moment? We have experience with GMZs
7 at solid and hazardous waste -- or solid waste
8 landfills in Illinois. They are commonly utilized
9 in -- if a site is capped, that's considered the
10 remedy, and then the GMZ is implemented while the
11 cap is -- it takes effect, essentially. So
12 groundwater monitoring takes place during that
13 process, and there is a few different solid waste
14 landfills that we have worked with where that
15 process has played out as well.

16 MS. NIJMAN: And how -- you are
17 familiar with the term "monitored natural
18 attenuation" or "natural attenuation"?

19 MR. MAXWELL: Yes.

20 MS. NIJMAN: And we can refer
21 that -- to that as MNA, which is tricky. How does
22 your experience with GMZs relate to MNA?

23 MR. MAXWELL: So MNA is the process
24 that's part of the evaluation of the GMZ.

1 Typically, I mentioned the cap example. The cap
2 is the active management aspect and the monitoring
3 goes with that in order to evaluate whether or not
4 the cap is actually having, in this example, the
5 intended benefit.

6 So the GMZ essentially is the
7 regulatory mechanism for properly evaluating the
8 effectiveness of the remedy, or the cap in this
9 example.

10 (Whereupon, Respondent's Exhibit
11 No. 1702 was marked for
12 identification.)

13 MS. NIJMAN: Thank you. If you
14 would turn to the third tab of your binder. And
15 we will also be showing this on the screen for
16 ease of review. So we have marked for
17 identification Exhibit 1702.

18 Mr. Dorgan, what is this
19 document?

20 MR. DORGAN: This is a presentation
21 that we prepared to provide an overview of the
22 main elements of our report just to put it in a
23 little more visual fashion, a little bit more
24 bullet point-oriented just to help present some of

1 the technical information in a little more
2 condensed and digestible format.

3 MS. NIJMAN: And turning to the
4 first page, just your general approach, and
5 this -- the third page, page 3 -- and the page
6 numbers are on the right-hand bottom corner.

7 On page 3, what is -- what was
8 the general approach for assessing the four
9 stations operated by or previously operated by
10 Midwest Gen?

11 MR. DORGAN: So what we have
12 presented on this slide is when we say general
13 approach, this is the high level overview of the
14 approach we took for the effort at evaluating
15 remedy and relief for the four sites. So it's
16 really composed of three main elements.

17 The first was establishing the
18 appropriate regulatory framework in terms of what
19 applied to what areas of each of the stations, and
20 certainly, the two primary drivers were the
21 federal and the state CCR surface impoundment
22 requirements, and the regulatory requirements that
23 applied to the regulated units at each of the four
24 stations, and then we also looked at the historic

1 fill areas that had been identified in previous
2 phases and referenced in the Board's opinion.

3 And then after that, we kind of
4 moved into looking at the sites themselves, and
5 the background of each of the sites, and the
6 conditions that existed both historically, and
7 currently. A big driver to the point about our
8 having looked at this risk-based corrective action
9 approach, we took a look at what were the
10 potential human -- exposures to both human and
11 ecological receptors.

12 That's primarily ecologic
13 receptors that may come in contact to the extent
14 there was groundwater leaving the site to a
15 surface water, and then the human exposures, we
16 are looking at primarily is there or will there be
17 groundwater wells that might be used for potable
18 purposes that could then bring a contaminant in
19 contact with the receptor?

20 So that was our primary focus
21 with that. And then we took a look at the
22 groundwater quality trends through a statistical
23 analysis. We kind of built on what it had done
24 previously, ran it through some statistical

1 testing that's consistent with good -- you know,
2 best practices and recognized by the EPA in the --
3 both the state and federal as a tool, and then we
4 did an evaluation of the downgradient groundwater
5 quality. We did that as just more of that
6 risk-based SRP, TACO-type strategy where the real
7 emphasis is placed on do we have contamination
8 that's coming in contact with receptors?

9 And then finally we considered
10 the remedial assessment that might be appropriate
11 for each of the four stations. Certainly, the CCR
12 regulations under both the fed and the Illinois to
13 some extent, even though we knew that there was an
14 Illinois program coming, and we knew that there
15 eventually would be a federal program coming for
16 historic fill areas, that was part of our
17 consideration as well.

18 And, really, we looked at a
19 combination of our risk evaluation, the trends
20 that we are seeing in groundwater downgradient of
21 the -- in the downgradient well network protective
22 of offsite receptors, and then the comparisons to
23 the relevant regulatory standards to guide how we
24 approached our remedy and relief strategy.

1 MS. NIJMAN: Can you describe
2 whether you had any concern in your review of the
3 CCR regulations, federal and state? Any concern
4 about conflict with a remedy you might propose?

5 MR. DORGAN: I think what we saw was
6 especially with respect to the upcoming subdocket
7 at the PCB for the Illinois rulemaking and then
8 now the proposed rule at the federal level, that
9 there is the potential that anything we do now
10 could come in conflict with whatever rule
11 eventually gets promulgated. That's certainly
12 consistent with the history of these four stations
13 where they have kind of been victim of that in the
14 past, having taken voluntary steps with respect to
15 things like redoing their pond liners that
16 eventually had to be redone after the rules came
17 out and established a new standard that they had
18 to meet. So that was a consideration.

19 MS. NIJMAN: In the absence of any
20 CCR rules that might apply to an area at these
21 stations, what regulatory framework would you
22 apply to the four Midwest Gen stations?

23 MR. DORGAN: Well, we felt that the
24 best framework available to us was through the

1 state's voluntary program, the site remediation
2 program, and its related TACO objectives. There
3 is two separate regulatory programs for those two
4 things, but they dovetail together.

5 And so that's what we would do
6 at any other brownfield site. A brown --
7 traditional brownfield site doesn't usually fall
8 under some sort of -- it's not a CERCLA site.
9 It's not a RCRA site. So in the absence of these
10 other frameworks, we looked to what would be the
11 most applicable, and we felt in this instance the
12 SRP and TACO type of a framework would be best
13 applied to the conditions at the sites where they
14 weren't already regulated through the CCR rules.

15 MS. NIJMAN: Okay. Let's go to the
16 next line, Regulatory Framework.

17 Now, you have already touched on
18 this when you talked about your general approach.
19 Did you divide out the regulatory framework that
20 applies to the impoundments versus historic fill
21 areas on this slide?

22 MR. DORGAN: Yes, we did. I kind of
23 touched on that a minute ago, which is we
24 recognize -- and others, Midwest Generation and

1 their consultants -- have previously made
2 determinations in terms of which of their surface
3 impoundments are regulated under either the
4 federal and/or the state programs. And so we saw
5 those continue to apply, and compliance with those
6 requirements would be ongoing.

7 Certainly, the Board orders
8 previously were considered in terms of their
9 earlier findings. The fact that we have the CCAs
10 that are still present, and with the GMZs and the
11 related ELUCs that continued to apply, and then,
12 of course, we continue to have data being
13 collected, and it will continue to be collected as
14 a result of the monitoring networks that exist for
15 the regulated units at the site.

16 So we -- we kind of put that on
17 one side of the ledger, and on the other side of
18 the ledger was these historic fill areas, which
19 had been recognized and documented at an
20 earlier -- earlier phases of this matter, and in
21 those cases, we fell back to general Illinois
22 groundwater standards which would apply; the
23 Illinois SRP and related TACO regulations,
24 certainly the orders of the Board were considered

1 as -- for those areas as well, and then we know
2 that we have got this Illinois subdocket that's
3 pending and now a federal proposed rule for these
4 fill areas. So they were considered.

5 And then, finally, we just
6 looked at what information is available for each
7 of these areas that we can use to frame up our
8 understanding of the conditions for each of those
9 areas and what might be appropriate for managing
10 them going forward.

11 MS. NIJMAN: You mentioned a minute
12 ago that Midwest Gen made determinations of which
13 surface impoundments would fall within the rules.

14 Does that decision get reviewed,
15 to your knowledge, by Illinois EPA?

16 MR. DORGAN: It's my understanding
17 that they are required to file permits with the
18 IEPA. They file their groundwater reports with
19 the IEPA. So, yes, the IEPA is involved in that
20 decisionmaking.

21 MS. NIJMAN: And do you know if the
22 Illinois EPA also sends invoices as to ponds that
23 might apply?

24 MR. DORGAN: That's my

1 understanding, yes.

2 MS. NIJMAN: You mentioned on the
3 left side of the slide the CCAs, and we have
4 talked about them a little bit. Why were the CCAs
5 at the Midwest Gen station, four stations,
6 relevant to your assessment?

7 MR. DORGAN: The CCAs had outlined a
8 set of actions that Midwest Gen was required to
9 take at each of their four stations, and by doing
10 so, they were able to then apply for and have
11 approved the GMZ.

12 So the fact that the GMZs remain
13 in place, which has an impact on our risk analysis
14 in terms of potential groundwater exposure and
15 receptors was an element that was important to our
16 considerations.

17 MS. NIJMAN: Did the CCAs begin
18 collecting data -- groundwater data? Excuse me.

19 MR. DORGAN: Yes. And the CCAs,
20 they -- Midwest Gen voluntarily agreed to begin
21 looking at their units at the request of the
22 Agency. They agreed to do so. That led to the
23 installation of some groundwater wells, and then
24 eventually that information led to broadening of

1 some of that, the groundwater monitoring programs,
2 and then ultimately the federal CCR rules kicked
3 in and brought further framework to the way in
4 which the units at the four stations are being
5 managed.

6 MS. NIJMAN: You have experience
7 working with CCAs in Illinois?

8 MR. DORGAN: I do.

9 MS. NIJMAN: And what types of
10 agreements might be entered into as an example of
11 CCAs? What types of actions under a CCA?

12 MR. DORGAN: Well, the CC -- most of
13 the CCAs -- we have done some brownfields. We
14 have done landfill sites. We have done corrective
15 action units under the RCRA program. And in each
16 instance, there are -- there is a requirement that
17 something has to be done to allow for the -- you
18 know, you are committing to doing something in
19 exchange for the GMZ. So, generally, there is a
20 remedy that's ongoing as part of a CCA.

21 MS. NIJMAN: In your opinion, is a
22 CCA a mitigating factor?

23 MR. DORGAN: In my opinion, it would
24 be. A CCA is something that you are entering into

1 voluntarily. You are going to the Agency and
2 saying, "We are ready to work with you, addressing
3 the concerns that you may have." And so it's a --
4 it's a collaborative process with the regulator
5 before you agree on the actual steps you are going
6 to take. So there is a great deal of
7 communication and interaction with the Agency's
8 concerns, taken into account and then acted on
9 them.

10 MS. NIJMAN: The next slide that
11 describes your overall process is the Background
12 Site Conditions. We are on slide 5 of
13 Exhibit 1702.

14 Would you describe what you have
15 listed here? And I can refer you to Section 1.5
16 on page 8 of your expert report as well, if you
17 want to refer back and forth.

18 MR. DORGAN: So, once we kind of
19 framed up the regulatory outline, we moved into
20 looking at the condition of the sites themselves.
21 The background that was available at each of the
22 sites, that first led us to looking at what
23 previous investigations have occurred at each of
24 the sites there has been -- in most instances, a

1 series of them has occurred over time. Those
2 investigations helped to inform our understanding
3 of the physical and hydrogeologic conditions and
4 the setting at each of the four sites.

5 They certainly helped in
6 understanding the surrounding land uses, which are
7 important to our evaluation. They had some useful
8 information about past efforts at identifying
9 offsite receptors, both ecological and
10 groundwater -- potential groundwater or lack of
11 potential groundwater users, and then, of course,
12 the analytical results from the ongoing monitoring
13 that's happened, and some of the historic
14 investigations were an element in totality of how
15 we considered what was going on at the stations.

16 And then from that, we kind of
17 moved into more of a data analysis and evaluation
18 process. So, now we know where our data is and
19 where it came from. Let's take a look at it.
20 Let's see how it helps inform our understanding of
21 what's going on at these sites, the risks that may
22 exist at the site. So, that was the first step,
23 evaluating the risk through kind of a standard
24 risk model evaluation.

1 And then we went into quite a
2 bit of detail in looking at the -- into the data
3 itself and the long record of data that we now
4 have, given the period that the groundwater has
5 been monitored at these four stations, and we
6 looked at that data with respect to trends and
7 focused our trend evaluation on the sensitive
8 downgradient receptor population.

9 MS. NIJMAN: We had been discussing
10 a few moments ago the updated information about
11 each of the stations. Do you recall that?

12 MR. DORGAN: Yes.

13 MS. NIJMAN: Did you also prepare a
14 summary document of updated information about each
15 of the surface impoundments or ponds at the
16 station?

17 MR. DORGAN: We did. We kind of
18 felt that a cheat sheet of sorts would be helpful
19 just to track what's going on at each of the
20 sites, and quite a few of the updates that had
21 happened since our original report was issued.

22 MS. NIJMAN: And I can refer you to
23 the second to last page of this exhibit, 1702.

24 Is that the table of the surface

1 impoundments that you are referencing?

2 MR. DORGAN: Yes, it is. It would
3 be page 97 in the presentation, numbering
4 continued.

5 MS. NIJMAN: And who prepared this
6 chart?

7 MR. DORGAN: Mike and I worked on it
8 together. We had a little bit of a basis of this
9 outline and just kept kind of building onto it as
10 we recognized there was more information to be
11 added.

12 MS. NIJMAN: So we will discuss this
13 more when we get into each of the stations, but
14 when you heard Mr. Gnat testify earlier, you heard
15 him talk about how each of these stations are
16 located or where each of the stations are located.
17 Do you remember that?

18 MR. DORGAN: Yes, I do.

19 MS. NIJMAN: Is it your -- what is
20 your opinion as to whether the stations are
21 located in industrial areas?

22 MR. DORGAN: Certainly predominantly
23 industrial. Some more than others. Waukegan is
24 an example of a heavily industrial area, given its

1 surrounding land uses. We do have some
2 residential uses located at a couple of the sites,
3 but in -- relatively distant. Most instances the
4 immediately surrounding properties are in some
5 cases water bodies, other industrial users, some
6 heavy industrial users quarrying operations. It
7 kind of runs -- runs the gamut.

8 MS. NIJMAN: You also list on this
9 slide potential receptors. Is that the same kind
10 of review as, like, a pathway analysis?

11 MR. DORGAN: Yes. What -- what we
12 are doing there is there is a concept and risk
13 evaluation which talks about the risk triangle,
14 and that's -- there is -- three things needed to
15 be present for risk to occur. You have to have a
16 contaminant source. You have to have a pathway by
17 which that contaminant can move, and then you have
18 to have a receptor.

19 So bring the contaminant to the
20 receptor at concentrations that exceed our
21 relative standard, that could be indicative of
22 risk, but if you eliminate any one of those three
23 things, you don't have a risk. So one of the
24 things that we try to do in these types of

1 evaluations is look at that risk triangle.

2 Do we have a contaminant source?
3 Do we have a pathway? Do we have a receptor? And
4 when you can demonstrate that one of the three of
5 those things is absent, it gives you a good
6 understanding of the true risk posed by the site
7 condition. So that was certainly part of our
8 overall approach towards evaluating risk.

9 MS. NIJMAN: And is that an approach
10 that you have used in other sites in Illinois with
11 the Illinois EPA?

12 MR. DORGAN: Yes, it is.

13 MS. NIJMAN: Turning to the next
14 slide, slide 6 in Exhibit 1702.

15 Here you discuss Evaluation of
16 Risk to Surface Water. Can you describe what's
17 happening here?

18 MR. DORGAN: So I think it's pretty
19 clearly been demonstrated that each of the four
20 sites are proximal to surface water bodies. So
21 understanding the risks that may be posed by the
22 conditions that exist at the sites to those
23 surface water bodies was something that we wanted
24 to understand.

1 So in this particular instance,
2 we looked at the 35 IAC Part 302 Illinois Water
3 Quality Standards, and also the water quality
4 criteria for surface water, published sources that
5 are available from the state, and then we compared
6 the downgradient data to the relevant standards.

7 So, if there was a water quality
8 standard, we used it, and if not, we used the
9 Illinois chronic water quality criteria, so -- and
10 basically there we are saying, if this groundwater
11 came in contact with this surface water, would
12 there be a risk to the surface water?

13 And then we, of course, made
14 comparisons to those standards for the monitored
15 constituents, which were primarily the Appendix
16 III and Appendix IV parameters under the current
17 regulatory monitoring program. And then we also
18 looked at the average downgradient concentrations
19 looking at the data set over time to do those
20 comparisons.

21 So we were looking at what's
22 that average concentration in our monitoring wells
23 relative to these standards, and then we also
24 considered whether there were any potable wells

1 that were in use downgradient of the stations.

2 MS. NIJMAN: And generally, high
3 level, what did you find?

4 MR. DORGAN: Generally, we found
5 that we weren't exceeding water quality criteria,
6 and that in each of the four stations there were
7 not potable wells in use that would allow
8 potential receptors to come in contact with
9 impacted groundwater.

10 MS. NIJMAN: Do you recall
11 Mr. Quarles testifying about whether the CCR rules
12 consider risk?

13 MR. DORGAN: Yes, I do.

14 MS. NIJMAN: And if you need to, I
15 can refer you to his rebuttal report as well, but
16 do you agree that the CCR rules do not consider
17 risk?

18 MR. DORGAN: Oh, I think what he
19 was -- I think what -- if I recall from his
20 testimony at the earlier phase of the hearing is
21 he was making reference to the Illinois
22 groundwater standards that weren't necessarily
23 based on risk, which we disagree with. The
24 groundwater standards are predicated on risk

1 models similar to how the federal drinking water
2 standards are promulgated.

3 So there are any number of risk
4 criteria that are considered; toxicity, duration
5 of exposure, sensitivity to the receptor as far --
6 and in terms of developing those standards. So
7 there is a risk element just to the standards
8 themselves.

9 MS. NIJMAN: I can refer you to page
10 45 of your expert report, but you also said it
11 earlier, that Mr. Seymour prepared a risk
12 analysis. Do you recall that?

13 MR. DORGAN: Yes, I do.

14 MS. NIJMAN: So in the first
15 paragraph of your expert report, which is
16 Exhibit 1701 on page 45, Section 4.4, you actually
17 mention, "A similar statistical risk evaluation
18 was presented in the expert opinion of John
19 Seymour."

20 Do you see that?

21 MR. DORGAN: Yes, I do.

22 MS. NIJMAN: And what were
23 Mr. Seymour's findings? And I just mean at a high
24 level.

1 MR. DORGAN: I think Mr. Seymour
2 came to the same conclusion in terms of his
3 evaluation of the risk to downgradient receptors.
4 He felt that there was an absence of risk posed by
5 the four stations.

6 MS. NIJMAN: Since Mr. Seymour did a
7 risk analysis, why did you do another one?

8 MR. DORGAN: It's part of our
9 standard approach towards evaluating these types
10 of sites. We certainly wanted to -- we considered
11 Mr. Seymour's findings, but wanted to look at them
12 independently and also just consider whether there
13 were any change conditions that needed to be
14 considered.

15 MS. NIJMAN: Mr. Maxwell, turning to
16 you on the question of data evaluation, which is
17 the next slide, how were you involved in
18 conducting the data analysis or evaluation part of
19 this project?

20 MR. MAXWELL: So I helped organize
21 the statistical evaluation of the data, as has
22 been testified -- as Mr. Gnat testified to. There
23 is -- has been a number of different monitoring
24 programs at the various stations under which data

1 has been collected. So I helped oversee the
2 collection of that data, the organization of that
3 data, and we utilized a statistical evaluation
4 software known as Sanitas in order to perform some
5 statistical testing.

6 And just backing up for a
7 moment, the constituents that were evaluated --
8 just to offer a little bit more detail, the
9 detection constituents under the 40 CFR 257,
10 Appendix III, as well as the assessment
11 constituents under Appendix IV under 257 was
12 the -- were the constituents that were evaluated.

13 We also looked at the -- we
14 wanted to look at as much data around the ponds as
15 we could, so we took the historical data and
16 wanted to focus the analysis on what we felt the
17 wells that were the most representative and in
18 terms of our analysis. And that was the
19 monitoring wells that were on the downgradient
20 side of the ponds.

21 MS. NIJMAN: You note here as one of
22 your first bullet points that there is a
23 substantial quantity of groundwater quality data
24 for the facilities, and I can refer you to page 26

1 of your expert report if you'd like to see your
2 discussion there.

3 What do you mean by that?

4 MR. MAXWELL: Yeah. So there has
5 been quarterly groundwater monitoring occurring at
6 these stations since the first monitoring event
7 was performed in 2010, so we have got at this
8 point over ten years of data at the stations, and
9 there is multiple groundwater monitoring systems
10 at the four stations, multiple monitoring wells,
11 multiple constituents.

12 When you sum up the sum total of
13 data, it's many thousands of individual data
14 points are available to us to try to evaluate what
15 the conditions are. So there was a substantial
16 quantity of data that was available to us.

17 MS. NIJMAN: Do you have an opinion
18 about whether existing data at a site should be
19 used to develop a remedy or assess a remedy?

20 MR. MAXWELL: Well, absolutely. The
21 data is the basis for the remedy, and that really
22 is the -- that's -- that is the basis for
23 designing a remedy.

24 MS. NIJMAN: If there are gaps in

1 data for a remedy assessment, can you fill that in
2 as part of your remedy?

3 MR. MAXWELL: That is a common
4 approach. It's difficult, and it's not practical
5 in many instances, to answer every single question
6 in terms of how a particular site is
7 characterized. Data gaps are something that are
8 often part of the process as you move from
9 investigation into remedy, and designing and
10 implementing a remedy is an opportunity to fill in
11 those data gaps potentially, to the extent that
12 they may exist.

13 MS. NIJMAN: Do you recall
14 Mr. Quarles stating that he recommended a Nature
15 and Extent Study at the four stations?

16 MR. MAXWELL: Yes.

17 MS. NIJMAN: Do you recall whether
18 he said -- gave us a scope or any idea of what
19 that would consist of?

20 MR. MAXWELL: Yeah. My recollection
21 is that he did not offer much in the way of
22 filling in what that would be. So there really
23 wasn't a lot of definition to that, other than,
24 you know, further investigation.

1 MS. NIJMAN: In your opinion, is
2 there sufficient data to develop a remedy at the
3 four stations?

4 MR. MAXWELL: In our opinion, there
5 is. We feel like we have enough data to -- to
6 develop a remedy, and I guess I would point out
7 that the prior two experts felt the same way, and
8 in the prior phase of the case, they were able to
9 opine on an appropriate remedy. So we would
10 agree. We would agree that the data that's
11 available to us was -- was sufficient.

12 MS. NIJMAN: Turning to page 8 of
13 the slide presentation at Exhibit 1702,
14 Statistical Trend Tending.

15 Mr. Dorgan, is this you?

16 MR. MAXWELL: I think this is me.

17 MR. DORGAN: I think Mr. Maxwell is
18 the guy for this.

19 MS. NIJMAN: Perfect. Okay.

20 What kind of trend testing did
21 you conduct?

22 MR. MAXWELL: So the test by name
23 was called the Mann-Kendall Test, and this is a
24 test that is referenced in the USEPA statistical

1 literature. The March 20 -- 2009 Statistical
2 Analysis of Groundwater Monitoring Data at RCRA
3 Facilities Unified Guidance is the applicable
4 reference here. It's a -- it's a quantitative
5 non-parametric test that allows us to come to
6 quantitative conclusions in terms of what the
7 trends are looking like in the data.

8 And there is five potential
9 outcomes that result. There is an upward trend,
10 there's a downward trend, there's no trend -- I'm
11 sorry. Let me back up.

12 There's a downward trend, a
13 statistically significant downward trend, no
14 trend, upward trend, statistically significant
15 upward trend. So there's five potential outcomes,
16 and this is a test that we have utilized on other
17 projects where -- where GMZs have been employed --
18 other projects in Illinois where GMZs have been
19 employed. We have utilized these tests on other
20 CCR landfills that -- where closure had -- that
21 have undergone a closure that have been capped.

22 And so it offers a -- we think a
23 convenient, robust means of looking at what the
24 overall trends are doing in terms of the

1 groundwater quality so that we can make that
2 judgment about whether or not the -- the cap, the
3 remedy, whatever it is, that's the -- the active
4 remedy, whether or not it's being effective or
5 not.

6 MS. NIJMAN: And this is an analysis
7 that the Illinois regulators also rely on, the
8 Mann-Kendall?

9 MR. RUSS: Objection, leading.

10 HEARING OFFICER HALLORAN:
11 Sustained.

12 MS. NIJMAN: Will you describe your
13 experience with Illinois regulators dealing with
14 Mann-Kendall statistical testing?

15 MR. MAXWELL: We do have at least a
16 couple of different sites that we deal with
17 Illinois EPA that utilize the Mann-Kendall -- the
18 Mann-Kendall testing, and on a regular basis. We
19 have got one site that requires that we do an
20 annual evaluation of the trends that's reviewed
21 annually by Illinois EPA so that we can -- we have
22 some confidence that the cap that has been put on
23 the landfill continues to be -- continues to be
24 effective.

1 MS. NIJMAN: You mentioned GMZs.
2 How do we relate this trend testing back to the
3 GMZs?

4 MR. MAXWELL: Yeah. The -- so the
5 GMZs are in place because some type of remedy, the
6 cap being the most obvious example, has been
7 implemented. A GMZ -- the idea behind a GMZ is
8 that you don't get it forever. You have got to
9 be -- the regulation requires that you take steps
10 to demonstrate compliance with the groundwater
11 quality standards. Trend testings show you
12 whether or not you are on the right track.

13 MS. NIJMAN: You mentioned the caps
14 as an active potential remedy. In our situation,
15 did you consider whether the liners for the CCAs,
16 re-lining the ponds for the CCAs, were an active
17 remedy?

18 MR. MAXWELL: Yeah, that would fall
19 under the same or a similar category as a cap.
20 The intended outcome of re-lining a pond is to --
21 is to have a benefit to the groundwater quality.
22 So that would fall into the -- a similar category,
23 yes.

24 MS. NIJMAN: Did you -- have you

1 reviewed the annual groundwater reports prepared
2 by KPRG for the stations?

3 MR. MAXWELL: We did review them at
4 a high level, yes.

5 MS. NIJMAN: And those reports as I
6 recall -- or let me ask you.

7 Do you recall whether those
8 reports have a time versus concentration analysis?

9 MR. MAXWELL: They do. They have
10 got those graphs, and I would point out that those
11 time versus concentration graphs, it allows for a
12 visual representation of the patterns over time.
13 However, it's not a quantitative test like the
14 Mann-Kendall test is. So, it's more of a visual
15 presentation that allows one to assess at a very
16 high level what the concentrations of a
17 constituent are doing over time.

18 MS. NIJMAN: You mentioned that you
19 looked at the downgradient wells to use in your
20 trend testing, right?

21 MR. MAXWELL: Yes.

22 MS. NIJMAN: Is the downgradient
23 well the same at the four stations as the property
24 boundary?

1 MR. MAXWELL: No. It's actually
2 not. That's one of the elements that makes our --
3 this evaluation conservative, and that is that
4 there is -- there is further opportunity for the
5 groundwater to flow and allow the natural
6 mechanisms of attenuation dispersion to take
7 place, and as those mechanisms take place, the
8 concentrations of the constituents in the
9 groundwater typically will go down, and so that's
10 what makes the analysis that we undertook with the
11 wells further upgradient from the property
12 boundary conservative.

13 MS. NIJMAN: So, let me to
14 understand. You would -- usually in a
15 Mann-Kendall would you usually use the property
16 boundary location?

17 MR. MAXWELL: That depends on the
18 regulatory program --

19 MS. NIJMAN: Okay.

20 MR. MAXWELL: -- would be the way I
21 would answer that. Under TACO, under a TACO SRP
22 type of approach, the property boundary is the
23 applicable -- is the applicable location. It's
24 the critical location, because that's the point at

1 which you lose the control of your property.

2 So you can put an ELUC, for
3 example, on your property, and then that would end
4 at your property boundary.

5 MS. NIJMAN: But that is not the
6 situation here; is that right?

7 MR. RUSS: Objection.

8 MS. NIJMAN: Is that the situation
9 with the four stations here, in that you went to
10 the property boundary or not?

11 MR. MAXWELL: We did not go
12 to the -- the wells that we assessed for the
13 Mann-Kendall were not at the property boundary.

14 MS. NIJMAN: I would like you to
15 refer to page 43 of your expert report at
16 Exhibit 1701.

17 Do you see the first, full
18 paragraph on page 43? Is that the discussion of
19 the Mann-Kendall data analysis?

20 MR. MAXWELL: Yeah. That is the
21 lead-in, yes.

22 MS. NIJMAN: In looking at the
23 bullet points on page 43, does that list the
24 wells?

1 MR. MAXWELL: Yes, it does.

2 MS. NIJMAN: And so -- well, you
3 tell me. These -- the listing of wells you have
4 for the four bullet points here for the four
5 stations, what are these wells?

6 MR. MAXWELL: Those are -- those
7 were the monitoring wells that were the subject of
8 the Mann-Kendall testing that was performed.

9 MS. NIJMAN: Did you use all of the
10 wells in your Mann-Kendall testing, all of the
11 wells at each station?

12 MR. MAXWELL: We did not use all of
13 the wells. Mr. Seymour, I -- did use all of the
14 wells, and so we were building off of what
15 Mr. Seymour had done, and as mentioned, the --
16 what we feel to be the most critical wells were
17 evaluated, those wells that were on the
18 downgradient side of the ponds.

19 MS. NIJMAN: On page 44 of your
20 expert report, you have a discussion, again, for
21 each station about the results of the trend
22 testing. Generally, again at a high level -- we
23 will get into more detail -- what did the trend --
24 the Mann-Kendall trend testing show?

1 MR. MAXWELL: So, at a high level it
2 showed that the groundwater conditions were
3 generally improving, that there were more -- there
4 were more downward trends overall than upward
5 trends, and that in many cases, there was a no
6 trend conclusion or result. However, in the
7 majority of those instances, that was due to the
8 majority of the data being non-detect, not
9 reported above the laboratory reporting limit.

10 MS. NIJMAN: Do you recall
11 Mr. Quarles commenting that the CCR rules require
12 compliance at the waste boundary when he was
13 discussing your trend testing?

14 MR. MAXWELL: I do.

15 MS. NIJMAN: What was he saying
16 there; do you recall?

17 MR. MAXWELL: Well, I think he was
18 simply citing the federal CCR rules, and in
19 practice, to put a -- it's just not practicable to
20 put a well right at the waste boundary.
21 Typically, what's done in practice is you get it
22 as reasonably close to the waste boundary as you
23 can, and I think we will see, as we get into our
24 analysis, that the wells that we performed the

1 Mann-Kendall evaluation on were sufficiently close
2 to the waste boundary.

3 MS. NIJMAN: Do you have
4 Exhibit 1102 in front of you, which is
5 Mr. Quarles' rebuttal report?

6 MR. MAXWELL: Yes, we do.

7 MS. NIJMAN: If you would look at
8 page 31, the carryover paragraph of Mr. Quarles'
9 rebuttal report, and it's on the screen as well.
10 The bullet on the bottom of the page, and then
11 carrying over to page 32, the remaining bullets.
12 What was Mr. Quarles doing here?

13 MR. MAXWELL: Well, what he was --
14 sorry.

15 What he was doing was, I guess,
16 presenting an alternate -- an alternate viewpoint
17 of the way that we had summarized the data.

18 MS. NIJMAN: And is he -- does he
19 redo your math?

20 MR. MAXWELL: That's essentially
21 what he does. He makes a point about that -- he
22 indicates that the decreasing trend conclusion he
23 doesn't believe is correct, but what he is not
24 considering is that -- the fact that the

1 non-detect or the no trend trends, the majority of
2 those are actually a situation where you have got
3 a non-detect result. And so it certainly is a
4 mischaracterization of the way that we had
5 presented the data in our report.

6 MS. NIJMAN: So are you saying that
7 Mr. Quarles took the no trend data and assumed it
8 was a downward trend?

9 MR. RUSS: Objection, leading
10 question.

11 HEARING OFFICER HALLORAN:
12 Sustained. Rephrase.

13 MS. NIJMAN: How did Mr. Quarles
14 interpret your no trend data?

15 MR. MAXWELL: I believe that he --
16 well, he categorized the no trends together with
17 the upward trends, is what he did, and so that
18 very much mischaracterized the value or the
19 importance of the no trends.

20 MS. NIJMAN: Did Mr. Quarles perform
21 a Mann-Kendall trend test?

22 MR. MAXWELL: No, he did not. At
23 least it wasn't in his report.

24 MS. NIJMAN: Could he have done so

1 with the data available?

2 MR. MAXWELL: I suspect that he
3 could have, yes.

4 MS. NIJMAN: On page 32 of
5 Mr. Quarles' rebuttal report, in the middle of the
6 page, Mr. Quarles says that Weaver, WCG, "failed
7 to include all historically contaminated wells in
8 his statistical analysis." Do you see that?

9 MR. MAXWELL: Yes.

10 MS. NIJMAN: And we talked about
11 this a little bit already.

12 What is your response to his
13 criticism?

14 MR. MAXWELL: That those particular
15 wells aren't necessarily critically important to
16 the evaluation, No. 1. Those wells are -- are
17 further upgradient, and in terms of the risk,
18 those wells are covered under the GMZ under the
19 ELUC, and by the time the groundwater gets further
20 downgradient from those wells, those are the wells
21 that we have evaluated. And so those are the
22 critical wells in terms of the overall trends.

23 MS. NIJMAN: Do you know whether
24 Mr. Seymour also reviewed all the wells?

1 MR. MAXWELL: Mr. Seymour did look
2 at all of the wells in his trend analysis, yes.

3 MS. NIJMAN: Do you recall what
4 Mr. Seymour's results were in his trend analysis
5 at a high level?

6 MR. MAXWELL: Yeah. At a high level
7 he found that the concentrations generally were
8 downward. Not in all instances, but in general.

9 MS. NIJMAN: Let's go back to the
10 PowerPoint.

11 Mr. Dorgan, looking at slide 9,
12 the Remedial Assessment Process, can you describe
13 this?

14 MR. DORGAN: So, we have established
15 the steps that we took leading up to being at this
16 point; most recently, the discussion with
17 Mr. Maxwell about our trend testing. So once we
18 had completed that, we began looking at what is
19 needed here to manage the risks and the conditions
20 that we have identified.

21 So there were several elements
22 of that evaluation; the first being just the
23 historic nature of CCR at the stations, the length
24 of time that the CCR has been there, the length of

1 time that these stations have been operating. I
2 think in two instances it's been over 50 years,
3 and I think in two it's been close to 100.

4 So while it's recognized that
5 there are CCRs present at the sites, most of that
6 has been there for a very long time. And there is
7 a defined mass of material that's present, and
8 that hasn't been changing with time. The
9 regulated units have been managing ash now for
10 quite while, and so the fact that the conditions
11 are somewhat static was something that was
12 important to our evaluation.

13 We certainly looked at all the
14 prior assessments. There has been Phase I and
15 Phase II site assessments. There have been
16 various investigations to address specific needs
17 that the stations have had, and then, of course,
18 there has been investigations, too, as part of the
19 compliance with the CCR regulations.

20 We know that those CCR
21 regulations are in place, and will continue to be
22 in place. So, to the extent any ash continues to
23 be generated, it will continue to be managed in
24 accordance with those requirements, and with

1 surface impoundments, that we understand will be
2 brought to compliance with the CCR regulations.

3 We've already discussed the fact
4 that we took a more risk-based approach towards
5 considering the conditions that exist at the site
6 with respect to sensitive offsite receptors and
7 what ultimately would be protective of human
8 health and the environment. And then for those
9 areas where ash has been documented to be present
10 outside of the impoundments, we -- in the absence
11 of any other regulatory framework, we have applied
12 what we think is most relevant, which would be a
13 more traditional SRP TACO-type approach towards
14 it. So that was the basic foundation of how we
15 approached the remedial assessment.

16 MS. NIJMAN: And if you look at
17 pages 51 and 52 of your expert report, does that
18 give you a high level review of the proposed
19 remedy for the four stations?

20 MR. DORGAN: Yes. So after laying
21 out in detail the things that we have just
22 summarized in the presentation, we came to some
23 basic conclusions in our report that appear on
24 page 42 -- or 51 and continue on 52 and 53.

1 MS. NIJMAN: And, generally, you
2 mentioned on your slide, slide 9, CCR regulations
3 for further control of surface impoundments. And
4 you have also mentioned CCR for monitoring.

5 Would you explain how the CCR
6 rules relate to your remedy?

7 MR. DORGAN: Well, we -- we consider
8 those to be important mechanisms to continue
9 managing risk at the sites, and we would assume
10 and anticipate that the CCR impoundments will
11 continue to conform with the regulations and any
12 modifications to the regulations that may be
13 forthcoming.

14 And, of course, in most
15 instances that's going to be closure of the
16 surface impoundments, since most of them are no
17 longer receiving ash. So, well, very recent
18 developments continue to alter the perspective and
19 the approach towards what's going on at these
20 sites. So that -- we anticipate that to continue
21 to evolve, and it's going to have to be adaptive
22 and dynamic.

23 But, otherwise, we felt that
24 with the conditions that are already in place for

1 three of the four sites; Joliet, Powerton and Will
2 County in particular, that with the steps that
3 have already been taken with respect to the CCR
4 rules, the steps taken for the CCAs, the fact that
5 we have monitored natural attenuation continuing
6 to occur at those sites, and that we continue
7 monitoring groundwater to evaluate the advancement
8 of the MNA, that we felt that the proper
9 mechanisms were already in place at those three
10 stations to address the site conditions, with the
11 caveat that new rules are coming, and then when
12 they do come, they will have to be evaluated and,
13 perhaps, considered with respect to any
14 modification to that strategy.

15 MS. NIJMAN: You mentioned MNA, and
16 I just wanted to -- we talked about it a few
17 minutes ago.

18 How common is MNA used in
19 Illinois? How commonly is it used in Illinois as
20 part of the remedial process?

21 MR. DORGAN: MNA is regularly used
22 in any number of different regulatory programs in
23 Illinois. It's commonly accepted. The Agency
24 does acknowledge MNA as a remedial strategy.

1 There is also a recognition that MNA takes time.
2 It's not something that occurs -- sometimes it can
3 occur relatively rapidly. Other -- other times it
4 takes longer periods of time.

5 It's one of the reasons why you
6 continue to monitor. It's why you have the GMZs
7 in place. It's why you have the ELUCs. We want
8 to -- while MNA takes place, we want to prevent
9 exposures, and therefore, protect human health and
10 the environment.

11 So, yes, MNA is -- MNA and the
12 absence of risk as a whole are two common Illinois
13 strategies to manage these types of conditions.

14 MS. NIJMAN: Can MNA be applied in
15 Illinois if a portion of the waste is in contact
16 with groundwater?

17 MR. DORGAN: Yes, it can.

18 MS. NIJMAN: In what kind of
19 conditions have you seen that occur?

20 MR. DORGAN: We have seen that with
21 historic landfill sites. We have seen that with
22 historic industrial process byproducts like slag
23 and foundry sand, plating tailings. Just because
24 a waste material is in contact with the

1 groundwater doesn't mean it has to be removed. It
2 means that it has to be managed, and MNA is a
3 method to manage the conditions posed by those
4 types of situations.

5 MS. NIJMAN: You described a few
6 minutes ago something about a mass analysis.
7 Could you describe your mass constituent that you
8 mentioned?

9 MR. DORGAN: In making the tie-in to
10 this idea that you could have waste below the
11 water table, one of the things that you consider
12 is, what is the waste material? What is the
13 contaminant loading in the waste material? How
14 long has that waste been in contact with the
15 groundwater?

16 As you can probably envision,
17 there is only a certain amount of, we will call it
18 contamination, in a waste stream, and that as it
19 migrates out of that waste stream, the
20 concentrations in the source will diminish over
21 time. In some instances, it can diminish to the
22 point that it's no longer detected.

23 The longer it's been in contact
24 with the groundwater conditions, the more time

1 there's been for mobilizing those contaminants,
2 and what will be left will continue to diminish
3 with time. So an understanding of what the
4 materials are, how much contact there is with the
5 groundwater, how long a period of time that those
6 materials have been in contact with the
7 groundwater are variables that need to be
8 considered with respect to assessing remedy and
9 appropriate actions.

10 MS. NIJMAN: What is your experience
11 with applying MNA where an exact source of
12 contaminant is not identified?

13 MR. DORGAN: As you can imagine,
14 some of these brownfield sites can be quite large.
15 It's often difficult to pinpoint every potential
16 source that might exist on a brownfield.

17 I have an example of a 3100-acre
18 former steel mill in Maryland that's going through
19 a brownfields process. And as you can imagine,
20 with a site that large, we can't always count on
21 identifying every individual source. It's why we
22 evaluate the groundwater on a system basis, and
23 specifically look at the downgradient groundwater
24 concentrations so that if there is an unidentified

1 source, we have the ability to pick it up in that
2 groundwater -- downgradient groundwater monitoring
3 network.

4 But that doesn't mean that we
5 will identify every source over that, in this
6 case, a 3100-acre property. It's just not
7 feasible.

8 MS. NIJMAN: Now, even if you have a
9 smaller property than 3100 acres, does that system
10 basis analysis still apply?

11 MR. DORGAN: It does, yes.

12 MS. NIJMAN: Do you recall that
13 Mr. Quarles discussed some articles about -- EPA
14 guidance documents about MNA?

15 MR. DORGAN: He did.

16 MS. NIJMAN: I would like you to
17 pull out in front of you what was previously
18 marked as Exhibit 1104.

19 MR. DORGAN: I'm not sure we have
20 that up here.

21 MS. NIJMAN: Mr. Dorgan, what is
22 Exhibit 1104?

23 MR. DORGAN: Exhibit 1104 is a USEPA
24 document entitled, "Use of Monitored Natural

1 Attenuation of Superfund, RCRA Corrective Action,
2 and Underground Storage Tank Sites" with an
3 effective date of April 21st, 1999.

4 MS. NIJMAN: Do you -- are you
5 generally familiar with this document?

6 MR. DORGAN: I am familiar with this
7 document.

8 MS. NIJMAN: I would like you to
9 look at page 18 of this document. I will give you
10 a Bates number. And if you would -- this is going
11 to be page 18 of Exhibit 1104, which is also Bates
12 No. COMP_67366. And if you would look at the
13 paragraph beneath the bullets. And let me know
14 when you have had a chance to read it.

15 MR. DORGAN: Yes, I have that.

16 MS. NIJMAN: What is that paragraph
17 saying?

18 MR. DORGAN: It's basically
19 outlining two scenarios for MNA; one where it's an
20 appropriate strategy, and also where it may not be
21 the best strategy to address site conditions.

22 MS. NIJMAN: And under the
23 conditions, what are the conditions where it might
24 be appropriate?

1 MR. DORGAN: Well, they lay out
2 three basic expectations. One is -- it says
3 specifically, "Of the above factors, the most
4 important considerations regarding the suitability
5 of MNA as a remedy include: Whether the
6 contaminants are likely to be effectively
7 addressed by natural attenuation processes, the
8 stability of the groundwater contaminant plume and
9 its potential for migration, and the potential for
10 unacceptable risks to human health or
11 environmental resources by the contamination."

12 MS. NIJMAN: And do the Midwest
13 Generation stations fall into those categories?

14 MR. DORGAN: We believe we have made
15 the argument that each of those conditions are
16 met, making MNA an alternative approach for these
17 sites.

18 MS. NIJMAN: And looking in
19 particular at the bolded language at the bottom of
20 that paragraph, can you read the bolded language?

21 MR. DORGAN: It says, "Therefore,
22 sites where the contaminant plumes are no longer
23 increasing in extent or are shrinking would be the
24 most appropriate candidates for MNA remedies."

1 MS. NIJMAN: And how did you
2 analyze -- did Weaver analyze that condition for
3 the four stations?

4 MR. DORGAN: I think probably our
5 trend testing was the most relevant analysis that
6 we performed. By demonstrating that the
7 groundwater conditions are generally improving and
8 not getting worse is an indication that you have
9 plume stability.

10 MS. NIJMAN: Can MNA be used on
11 inorganics?

12 MR. DORGAN: Yes, it can.

13 MS. NIJMAN: Have you seen that
14 successful in your experience?

15 MR. DORGAN: Yes, we have.

16 MS. NIJMAN: Does this document as a
17 whole mean that every site has to meet every
18 condition for MNA, in your opinion?

19 MR. RUSS: Objection, leading.

20 HEARING OFFICER HALLORAN: He can
21 answer, if he is able.

22 MR. DORGAN: Like many EPA
23 documents, it's a guidance document that's
24 intended to provide you considerations. With

1 respect to evaluating MNA, I think there is even
2 references here that, you know, you may have a
3 number of the criteria met, but not all of them,
4 and there is circumstances when the ones that you
5 don't meet could still be supportive of an MNA
6 strategy. So it's certainly when you do, that's
7 helpful, but it's not a requirement by which you
8 can apply these types of strategies.

9 MS. NIJMAN: How do individual sites
10 need to be evaluated then in comparison to MNA?

11 MR. DORGAN: Well, I mean, each site
12 has -- is going to have its own unique
13 characteristics. It's going to have its own
14 groundwater flow systems, its own mechanisms for
15 the natural process of MNA in terms of absorption,
16 retardation, attenuation, dispersion, diffusion,
17 and then, of course, the source concentrations,
18 the source materials themselves are going to vary.

19 So there is multiple
20 considerations, but in totality, you evaluate that
21 against these criteria to see whether it's an
22 accepted strategy or not.

23 MS. NIJMAN: The second document
24 Mr. Quarles referred to in his discussion of MNA

1 is -- has been marked as Quarles Exhibit 1105.

2 And do you see that there?

3 MR. DORGAN: Yes, I do.

4 MS. NIJMAN: If you would just look
5 at the title page of Exhibit 1105, which is Bates
6 No. COMP_67391. What does this page say?

7 MR. DORGAN: Well, this, again, is
8 another USEPA document dated August of 2015, and
9 it's entitled, "Use of Monitored Natural
10 Attenuation For Inorganic Contaminants in
11 Groundwater At Superfund Sites."

12 MS. NIJMAN: Are any of the Midwest
13 Gen stations Superfund sites?

14 MR. DORGAN: No, they are not.

15 MS. NIJMAN: And what is the
16 difference between a Superfund site and a
17 brownfield site?

18 MR. DORGAN: To be considered a
19 Superfund site, you've already gone through a
20 hazard ranking process to evaluate the presence of
21 risks, and a risk has been determined to be
22 present, and as a consequence, the evaluation, the
23 response to those conditions is a bit more
24 rigorous than when you can demonstrate that there

1 aren't risks.

2 MS. NIJMAN: What types of waste are
3 at Superfund sites?

4 MR. DORGAN: Typically, waste
5 regulated under CERCLA and also hazardous wastes
6 under RCRA.

7 MS. NIJMAN: How did you compare the
8 risk level at the Midwest Generation sites with
9 this site -- excuse me.

10 How did you compare the risk
11 level at the Midwest Generation sites?

12 MR. DORGAN: Well, so, at a
13 Superfund site, there is a technical process that
14 you go through to look at all of these inputs to
15 your risk assessment to create a score, and if you
16 score above a certain result, you are considered
17 to fall under the Superfund requirements.

18 Certainly, that's not the case.
19 That process has not happened and hasn't been
20 requested to happen. We have seen that the
21 conditions at the Midwest Gen facility, risks are
22 being controlled. Offsite receptors are being
23 protected. So there is really not a relevant
24 comparison between evaluation under Superfund and

1 evaluation under a risk-based strategy like what
2 we have done for the four stations.

3 MS. NIJMAN: You -- we spoke earlier
4 back on slide 9 about the CCR rules adding further
5 control. How do the CCR rule monitoring
6 requirements fit into your remedy assessment
7 process?

8 MR. DORGAN: So, the data collected
9 from the ongoing monitoring was certainly
10 considered. It's -- I think Mr. Maxwell talked
11 about the thousands. I think at the time our
12 report was generated it was something like 62,000
13 data points are available. That's a considerable
14 body of evidence to evaluate, which we have done,
15 so -- and that was, what, two years ago now?

16 So there is more data that has
17 been collected since, and there is going to be
18 more data collected in the years to come. There's
19 going to be an extensive database by both which to
20 evaluate the appropriate remedy and continue to
21 monitor it going forward. So the ongoing CCR unit
22 monitoring, both the data collected and the data
23 that we are going to be collecting, was a
24 significant consideration on how we evaluated risk

1 at the site.

2 MS. NIJMAN: Do the CCR rules for
3 surface impoundments specify an actual cleanup
4 method in the event of a release to groundwater?

5 MR. DORGAN: No, they don't. They
6 specify that you monitor the groundwater around
7 your regulated unit, and if there is a
8 demonstrated impact that can be attributed to the
9 unit, then an evaluation needs to occur in terms
10 of how to address that, but it does not specify
11 the methods for addressing it. That's site
12 specific and dependent on the unit and the
13 conditions encountered.

14 MS. NIJMAN: So there are
15 specific -- once you have a release to
16 groundwater, do the rules tell you what to do
17 about how to remedy the groundwater?

18 MR. DORGAN: No. They simply
19 require that you evaluate the groundwater
20 conditions and whether or not they are related to
21 your regulated unit and then take the steps
22 necessary to address the groundwater conditions.

23 MS. NIJMAN: So in this situation
24 with the four Midwest Generation stations then,

1 how did you determine what the remedy should be,
2 given a -- the Board's finding of release to
3 groundwater?

4 MR. DORGAN: We did not specify a
5 remedy for the CCR regulated units themselves. We
6 feel that that's already in a process. That
7 process is moving forward. That process will come
8 to a conclusion at some point, and that as long as
9 the steps needed to comply with that process are
10 being followed, we feel as though the risks are
11 being properly managed.

12 So we were more holistic in our
13 evaluation, again, taking that more SRP/TACO-type
14 approach of looking at the downgradient and the
15 protection of the offgradient receptors -- or
16 off-property receptors.

17 MS. NIJMAN: When you considered
18 your remedial assessment for the four stations,
19 how did you consider other types of remedies in
20 your analysis?

21 MR. DORGAN: A couple different ways
22 that that occurred. First was, as we have
23 indicated previously, there was a historic -- a
24 record, past evaluation and discussions about

1 remedying that was already in the record that we
2 took a look at. There's some discussion.
3 Mr. Seymour in particular opined on what remedy
4 was necessary. There had been some reference to
5 earlier evaluations of alternatives that were
6 deemed to be economically unreasonable, which we
7 would agree with; specifically, the idea that mass
8 removal would be kind of a default option.

9 And then, of course, we looked
10 at from a more traditional alternatives evaluation
11 process under more of an SRP/TACO strategy, we
12 considered what would you normally be looking at?
13 And that normal process takes into account the
14 technical practicability, economic reasonableness,
15 community impact, whether or not it will be
16 successful in addressing the contaminant
17 conditions in the ground, restoring the
18 groundwater.

19 So, while that was part of our
20 evaluation, we moved directly to the risk-based
21 strategy that we felt had the best application to
22 the conditions existing at the four sites.

23 MS. NIJMAN: Did you recall
24 Mr. Quarles referencing a feasibility study?

1 MR. DORGAN: He mentioned that in
2 his testimony, I believe.

3 MS. NIJMAN: And what is a
4 feasibility study?

5 MR. DORGAN: A feasibility study
6 would normally be done under a -- more of a
7 Superfund-type process where you would -- and
8 under RCRA, it's remedial measures evaluation.
9 You are basically looking at the site conditions
10 and running it -- you have to move it through a
11 number of considerations. You have to estimate
12 the costs related to those, and at the end of the
13 day, you end up proposing what you find to be the
14 best option. Much more rigorous, and applicable
15 to those sites where they are regulated under
16 those programs where the risks are more
17 significant, and you are subject to those
18 requirements; whereas, that's not the case with
19 the four sites for Midwest Generation.

20 MS. NIJMAN: If you would look to
21 the last tab in your binder. We have marked this
22 for identification as Exhibit 1703.

23
24

1 (Whereupon, Respondent's Exhibit
2 No. 1703 was marked for
3 identification.)

4 MS. NIJMAN: Do you recognize this
5 document?

6 MR. DORGAN: Yes, I do.

7 MS. NIJMAN: And what is this?

8 MR. DORGAN: It's my understanding
9 that these are minutes that were captured by
10 Mr. Kunkel in a communication that he had with
11 Ms. Bugel.

12 MS. NIJMAN: And just to -- for the
13 record, this is Bates No. COMP_041681. And,
14 again, Mr. Kunkel being the prior expert for
15 Complainants; is that right?

16 MR. DORGAN: That's correct.

17 MS. NIJMAN: If you would turn to
18 the second page, COMP_041682, would you read
19 what's in Paragraph No. 2, marked as No. 2 on this
20 page?

21 MR. DORGAN: Yes, this reads -- J.
22 Kunkel is on record in his July 22nd, 2014 letter
23 report to Abel Russ that, "The existing ash ponds
24 should be closed. However, Dr. Hennes's

1 recommendation of cleanup of existing groundwater
2 contamination using the pump and treat alternative
3 may be interpreted under the proposed USEPA rule
4 as technically impracticable because of the
5 proximity of canals, rivers, and Lake Michigan,
6 which could result in increased water pumping and
7 treatment if that alternative were utilized."

8 MR. RUSS: I'm going to object to
9 the use of this exhibit. These witnesses don't
10 have any familiarity with it. It's basically
11 hearsay, as far as they are concerned.

12 HEARING OFFICER HALLORAN:
13 Ms. Nijman?

14 MS. NIJMAN: Yes. Experts may rely
15 on and consider all data available to them.
16 Mr. Dorgan just testified that he considered that
17 other experts in this matter have looked at other
18 remedies, and this is one of the documents he
19 considered to do that.

20 HEARING OFFICER HALLORAN: Yeah, you
21 know, whether it's hearsay or not, I'm going back
22 to the Board's Rule 101 -- what was that -- 626.
23 Yeah, reasonable and prudent person would rely on
24 it. So, thank you. Overruled. You may continue.

1 MS. NIJMAN: Do you agree with the
2 assessment about whether a pump and treat remedy
3 at the four stations would be technically
4 impracticable?

5 MR. DORGAN: I agree with that
6 finding.

7 MS. NIJMAN: If you would read
8 what's listed at paragraph 6 on this page and
9 carries over.

10 MR. DORGAN: This paragraph states,
11 "Pump and treat as an option for groundwater
12 restoration probably is not a technically
13 practicable option for the four MWG power plant
14 sites. IEPA prefers natural attenuation for the
15 groundwater contaminants at power plant sites.
16 There are no historical examples of pump and treat
17 being used at ash disposal sites. J.K. will call
18 A.R. tomorrow (8/21/14) to discuss this. It was
19 agreed that for now the ELPC response to Question
20 No. 9 of the Midwest Gen first interrogatory will
21 be silent on pump and treat as a remedial option
22 at the four power plant sites."

23 MS. NIJMAN: Do you agree with the
24 statement that Illinois EPA prefers natural

1 attenuation for groundwater?

2 MR. DORGAN: I agree that they
3 commonly approve natural attenuation for
4 groundwater. They will certainly consider other
5 alternatives as well, but this is -- this is one
6 that they commonly accept.

7 MS. NIJMAN: I move to admit
8 Exhibit 1703.

9 HEARING OFFICER HALLORAN: Mr. Abel?

10 MR. RUSS: Just same objection.

11 HEARING OFFICER HALLORAN: Okay.
12 Your objection is noted. I am going to admit it
13 over objection, Exhibit 1703, based on my prior
14 ruling. Thank you.

15 (Whereupon, Respondent's Exhibit
16 No. 1703 was admitted into
17 evidence.)

18 MS. NIJMAN: How did Mr. Kunkel's
19 assessment of pump and treat being technically
20 impracticable impact your remedy analysis?

21 MR. DORGAN: We came to an
22 understanding after our evaluation of the
23 information in terms of framing up our historical
24 understanding of the sites and the hydrogeologic

1 conditions, that pump and treat wasn't going to be
2 viable. This was another data point that said,
3 there are others that agree with that.

4 MS. NIJMAN: You had mentioned that
5 you had reviewed Mr. Seymour's previous expert
6 report in this matter?

7 MR. DORGAN: That's correct.

8 MS. NIJMAN: And I think you stated
9 a few minutes ago that Mr. Seymour discussed
10 concerns with a remedy. What was the remedy?

11 MR. DORGAN: I believe in that case
12 he was commenting on a remedy that Mr. Kunkel had
13 suggested, which was a removal option to excavate,
14 haul offsite, and dispose at a landfill of the ash
15 materials outside of the impoundments.

16 MS. NIJMAN: Do you recall what
17 Mr. Seymour's concerns were about a removal
18 option?

19 MR. DORGAN: If I recall correctly,
20 I think his primary concern is he felt that the
21 estimate of costs were significantly
22 underreported, in that there were some key related
23 costs that were excluded from Mr. Kunkel's
24 analysis, and then he felt as though there hadn't

1 been an evaluation of community impact, impact to
2 the surrounding roads, the number of trucks that
3 would be required to support that type of an
4 effort. So as a consequence, he did not deem that
5 to be technically practicable.

6 MS. NIJMAN: And for the record,
7 that's -- the Seymour report was Exhibit 903 in
8 the previous hearing.

9 Do you agree with Mr. Seymour?

10 MR. DORGAN: Yes, I do.

11 MS. NIJMAN: What is your concern
12 about -- or what do you agree with relating to
13 truck travel?

14 MR. RUSS: Objection, leading.

15 HEARING OFFICER HALLORAN: I didn't
16 hear the question, and I didn't hear the
17 objection, so --

18 MS. NIJMAN: The question was, what
19 do you agree with with regards to truck travel?
20 What is not a leading question.

21 HEARING OFFICER HALLORAN: Yeah.
22 Overruled. You may answer, if you are able.

23 MR. DORGAN: One of the
24 considerations when you look at a removal action

1 is community impact, which is how many trucks are
2 going to have to roll throughout the surrounding
3 neighborhoods on a daily basis to accommodate the
4 removal. Those trucks, you know, give off diesel
5 exhaust and CO2 emissions, and they have an impact
6 on the road conditions. The local infrastructure
7 needs to be adequate to support it.

8 So, there is a number of
9 variables that would be considered when looking at
10 that option, and it doesn't appear that that had
11 been the case, and they, in our opinion, would be
12 significant.

13 MS. NIJMAN: And did you consider
14 some of these factors when assessing applicable
15 remedies for the four Midwest Gen stations?

16 MR. DORGAN: Yes, we did.

17 MS. NIJMAN: This might be a good
18 time for a quick break, if anyone needs.

19 HEARING OFFICER HALLORAN: Ten
20 minutes. We are off the record, Kari. Thank you.

21 (Whereupon, a short break was
22 taken.)

23 HEARING OFFICER HALLORAN: Back on
24 the record, Kari. You may proceed, Ms. Nijman.

1 Thank you.

2 MS. NIJMAN: Thank you.

3 If you could look at your expert
4 report, Exhibit 1701, at pages 21 and 22. It was
5 the second tab on your binder. And if it's
6 helpful for you, for anybody, if you want to just
7 take the text sections out of the binder to refer
8 to as you go forward so it's easier to flip back
9 and forth.

10 In looking at this Section 2,
11 what -- would you describe what this is,
12 Mr. Dorgan?

13 MR. DORGAN: These were several
14 high-level issues that we identified with respect
15 to Mr. Quarles' report and the way in which he --
16 either in our opinion misinterpreted or misapplied
17 certain standards to situations at the four sites.

18 MS. NIJMAN: In looking at your
19 first paragraph, Section 2.1, what was your
20 concern there with Mr. Quarles' report?

21 MR. DORGAN: Well, the way
22 Mr. Quarles had prepared his report, he
23 consistently made references back to the CCR
24 rules, but wasn't necessarily differentiating what

1 circumstances he was referring to. So it was our
2 interpretation of the way that he made those
3 references that he was attempting to apply the CCR
4 rules at both the federal and state level to the
5 entirety of the stations, not just the regulated
6 units, and we don't think that's the correct
7 application.

8 MS. NIJMAN: And do you recall in
9 his rebuttal report if Mr. Quarles responded to
10 your concern?

11 MR. DORGAN: He did.

12 MS. NIJMAN: And do you recall what
13 he said?

14 MR. DORGAN: He basically felt that
15 we had misinterpreted that, and that he understood
16 that there wasn't an application of the CCR rules
17 outside of the CCR-regulated units themselves.

18 MS. NIJMAN: In the next section,
19 2.2, what was your concern here about whether the
20 impoundments are used for permanent disposal of
21 ash?

22 MR. DORGAN: I believe that was
23 largely predicated off of the heading to his
24 section of the report which talked about CCR

1 impoundments and disposal of ash. And then the
2 way in which he referenced that in his report
3 suggested to us that he felt that the CCR
4 impoundments themselves are being used as a
5 permanent means of disposal, whereas they are
6 really just a treatment mechanism to remove water
7 before being dredged and removed. So that's what
8 we were pointing to.

9 MS. NIJMAN: And do you recall if,
10 again, Mr. Quarles responded to that concern?

11 MR. DORGAN: Again, he felt that we
12 didn't construe that correctly, and that wasn't
13 what he was implying.

14 MS. NIJMAN: The next section, 2.3,
15 Quarles fails to consider the extensive data
16 record available. What was the concern there?

17 MR. DORGAN: Well, Mr. Quarles in
18 his report and also in his testimony referenced
19 many times to the need for a Nature and Extent
20 evaluation. We interpreted the Board's order that
21 they were seeking identification of a remedy and
22 the appropriate relief related to that remedy as
23 it relates to what was already in the record. So
24 while we understand and Mr. Maxwell testified that

1 there may be instances where some data gaps need
2 to be filled, we felt that there was an extensive
3 reference that he really didn't reference.

4 He just kept coming back to,
5 need Nature and Extent, need Nature and Extent,
6 need Nature and Extent, and we felt like there has
7 been a lot of investigation and a lot of data
8 collected at these sites over the last ten plus
9 years that certainly warranted consideration, and
10 we did so.

11 MS. NIJMAN: On the next page, in
12 Section 2.4 of your expert report, Exhibit 1701,
13 you note, Quarles did not consider -- oh, I'm
14 sorry -- failed to consider specific factors used
15 by the Board.

16 What were you addressing there?

17 MR. DORGAN: Well -- and as we
18 reference later in our report, we were
19 specifically speaking to the Environmental
20 Protection Act Sections 33(c) and 42(h), which
21 spell out in the selection of a remedy criteria
22 that should be considered to determine their
23 reasonableness and appropriateness for the
24 conditions that you are addressing. And there

1 hadn't been any reference to those criteria in
2 Mr. Quarles' report.

3 MS. NIJMAN: If you would turn back
4 to Exhibit 1102, which is Mr. Quarles' rebuttal
5 report, and turn to page 25 of that report, there
6 is a paragraph that is there that's got the
7 heading, "Groundwater Elevations for Aquifer
8 Separation." Do you see that?

9 MR. DORGAN: Yes, I do.

10 MS. NIJMAN: Do you have an
11 understanding of what Mr. Quarles was trying to
12 say here?

13 MR. DORGAN: I think Mr. Quarles was
14 being critical of our reference to groundwater
15 elevations in our report with respect to the
16 bottom of the various pond liners suggesting that
17 we were somehow implying that the CCR impoundments
18 in all instances complied with that separation
19 criteria in the rule, which isn't necessarily what
20 we were trying to do.

21 MS. NIJMAN: And what was he saying
22 about assessing conditions beneath the pond?

23 MR. DORGAN: So when we referenced
24 to the groundwater elevations with respect to the

1 bottom of the ponds, we were looking at the wells
2 immediately around the ponds, which is what you
3 do. And what Mr. Quarles suggested here is that
4 you can't actually determine what the groundwater
5 elevation is, because you don't have a well
6 beneath your pond in order to demonstrate that you
7 don't have leakage and groundwater mounding, and
8 that's just inconsistent with typical procedures
9 and practices. It would not be practical. It
10 would be unwise to have a well through a pond to
11 try to measure groundwater elevations under a
12 pond.

13 MS. NIJMAN: Well, that's what I was
14 going to ask you. How would you measure
15 groundwater elevations beneath the pond, if not by
16 wells around it?

17 MR. DORGAN: Well, that's really the
18 only option you have, unless you put a well
19 through your pond, which makes more sense and
20 could create more problems than it solves.

21 MS. NIJMAN: What kind of problems?

22 MR. DORGAN: Obviously, you would
23 have to penetrate your liner. You'd create a
24 preferential migration pathway that could allow

1 contamination from the ash within the -- in the
2 ponds to be communicated down to your underlying
3 groundwater. So I can't -- Mr. Maxwell agrees
4 with me. I can't think of an instance where that
5 type of approach has been done.

6 MS. NIJMAN: I would like to turn to
7 the next slide, slide 10, which is the Joliet 29
8 Station, and I believe you stated earlier that
9 Mr. Maxwell focused more on Joliet 29.

10 MR. DORGAN: That's correct.

11 MS. NIJMAN: Okay. So, turning to
12 page 11 of your PowerPoint at Exhibit 1702. And
13 if you would also keep your expert report out,
14 Exhibit 1701, because we will refer back and
15 forth.

16 So looking at this slide,
17 Mr. Maxwell, what is the purpose of laying it out
18 this way?

19 MR. MAXWELL: So this is a summary
20 of the background and setting for the Joliet 29
21 Station, and on the right here is an aerial photo
22 showing the relevant features of this station.
23 And the left side lays out the appropriate
24 background material that we started with as we

1 started reviewing the materials in developing the
2 appropriate remedy.

3 MS. NIJMAN: And what were the
4 relevant factors as you go through here for Joliet
5 29's background and setting?

6 MR. MAXWELL: So the station
7 initially began operating in the 1960s, and it
8 wasn't acquired by Midwest Gen until 1999. The
9 station has since ceased burning coal as of 2016,
10 and in terms of the surrounding land use for the
11 station, that has been discussed a little bit
12 already here today, but it's located in a
13 predominantly industrial area.

14 When you look at what is
15 surrounding the station, off to the north is
16 industrial commercial facilities out beyond vacant
17 property to the north of US Highway 6. Off to the
18 south you have got the Des Plaines River, and on
19 the -- on the opposite side of the river is the
20 Joliet 9 Generating Station, and then when you
21 look at what's going on east and west of the
22 station, on the east side is the Brandon Road Lock
23 and Dam that Mr. Gnat had discussed earlier today.
24 And then to the west is the a prior SRP site that

1 was a former industrial site that had gone through
2 the SRP and attained an NFR letter and ultimately
3 redeveloped into a warehouse use there off to the
4 west of the station.

5 MS. NIJMAN: What does the -- so on
6 your map you have this area in green on the
7 left-hand side. What does that reflect?

8 MR. MAXWELL: That area in green is
9 the -- is an ELUC, the environmental land use
10 control that, as I understand, Midwest Gen agreed
11 to as part of the -- the remedy associated with
12 the SRP project there on the adjacent property.
13 There was a groundwater -- there was information
14 in that -- in that project file that indicated
15 that groundwater contamination had the potential
16 to come onto the Midwest Gen site.

17 And so in order to get the -- in
18 order for the applicant on the adjacent property
19 to get their no further remediation letter, this
20 ELUC was agreed to by Midwest Gen.

21 MS. NIJMAN: You note in your last
22 bullet that the Joliet 29 is scheduled to cease
23 burning natural gas in 2023, and I think
24 Mr. Dorgan also mentioned that.

1 How does that -- why is that an
2 important fact for you?

3 MR. MAXWELL: Yeah. I guess, you
4 know, not -- if a station is no longer producing
5 power, then the -- there is no materials that are
6 currently being produced that need to be sent to
7 the ponds or treated or disposed of. So it's, I
8 guess, a -- a source elimination, if you will,
9 that the -- the station is intending to cease
10 producing power.

11 MS. NIJMAN: And in the process
12 of -- the remedy process general approach that
13 Mr. Dorgan described, it was dividing the
14 impoundments or looking at the impoundments on one
15 side and the historic areas on the other side.
16 Did you do that with Joliet 29?

17 MR. MAXWELL: Yes, we did.

18 MS. NIJMAN: And I can refer you to
19 your expert report on pages 9 and 10, but I would
20 like to go through that handy chart you prepared
21 about the stations.

22 So the second to last page of
23 your PowerPoint, Exhibit 1702, was the chart that
24 Mr. Dorgan described earlier?

1 MR. MAXWELL: Yes.

2 MS. NIJMAN: And is Joliet 29 listed
3 on this chart?

4 MR. MAXWELL: Yes. It is at the
5 top.

6 MS. NIJMAN: Would you describe the
7 ponds at Joliet 29?

8 MR. MAXWELL: Yes. So there are
9 three ponds, and quite simply and easy to
10 remember, they are labeled Pond 1, Pond 2, Pond 3,
11 and none of them are currently receiving any CCR
12 material, and in terms of the CCR regulatory
13 status, Pond 2 is the only pond of the three that
14 fall under either the state or the federal CCR
15 rules, and Pond 2 actually falls under both.

16 In terms of liners, originally,
17 all three were lined with a Poz-O-Pac material
18 that dates back to 1978. As part of the CCA
19 process that was referred to earlier, each of the
20 ponds received an upgraded liner that was an HDPE
21 liner in order to enhance the -- the liner of each
22 of the three ponds. 2008 was the -- was the
23 installation date for Pond 1 and 2, and 2013 was
24 the date the HDPE was installed for Pond 3.

1 MS. NIJMAN: And looking at the next
2 column on comments, what ponds contain ash at
3 Joliet 29?

4 MR. MAXWELL: So, currently, none of
5 those three ponds, Pond 1, Pond 2, Pond 3,
6 currently contain CCR. There is -- there has been
7 a couple of different studies that have documented
8 that in the case of Pond 1 and Pond 3, and Pond 2,
9 it's noted here the CCR was removed by November of
10 2019, and that Pond 2 was presently moving through
11 the closure process under the -- the federal and
12 Illinois CCR rules.

13 And in this particular case,
14 there is a pending adjusted standard that is
15 before the Pollution Control Board that is seeking
16 to -- to close this pond and -- via repurposing it
17 so the intent is to close by decontaminating the
18 liner, rather than removing the liner.

19 And then just finishing out the
20 background information for the table, the
21 groundwater monitoring programs that are
22 implemented related to the ponds. The compliance
23 commitment agreement, the CCA agreement, applies
24 to all three ponds, and there is quarterly

1 groundwater monitoring that's taking place in
2 accordance with those requirements.

3 And then on top of that, there
4 is -- there's CCR monitoring that's occurring
5 related to Pond 2. Both the federal and state CCR
6 groundwater monitoring is occurring for a network
7 associated with Pond 2.

8 MS. NIJMAN: Okay. Let's turn to
9 slide 12 of your PowerPoint at Exhibit 1702.

10 What is this map identifying?

11 MR. MAXWELL: So this is a
12 summation, a compilation of the historical soil
13 borings, groundwater monitoring wells, sediment
14 locations that have been performed during the --
15 during the investigation history that we reviewed
16 as part of the record.

17 MS. NIJMAN: Was this also Figure 5
18 from your expert report?

19 MR. MAXWELL: Yes, it was.

20 MS. NIJMAN: And why was looking at
21 all the data in one place relevant to you?

22 MR. MAXWELL: Well, it gave us a
23 perspective for the quantity of data that's
24 available. I think it's a nice visual to show it

1 on a single map to demonstrate the quantity of the
2 information that we have as a totality.

3 MS. NIJMAN: We are going to talk
4 about it a little more later, but this map doesn't
5 show what has been referred to as the northeast
6 area on the far, right side of the map?

7 MR. MAXWELL: That is correct.

8 MS. NIJMAN: And are you aware of
9 any more recent data about the northeast area?

10 MR. MAXWELL: There has been some
11 more information that's been collected since our
12 expert report in 2021. It was discussed during
13 the hearing last month, and there were a -- there
14 was an investigation that was performed by the
15 Corp of Engineers, that involved some soil borings
16 along the river bank, and also involved the
17 collection of some sediment data along -- in the
18 river channel itself.

19 MS. NIJMAN: To your recollection,
20 did the borings show ash?

21 MR. MAXWELL: The borings along the
22 river bank did not show ash in the boring logs,
23 no.

24 MS. NIJMAN: To your recollection,

1 did the sediment samples show impact from the
2 Joliet 29 Station?

3 MR. MAXWELL: My recollection is
4 that the -- there was one or two lead results that
5 exceeded the standards, but that was the other
6 metals that were analyzed indicated that the
7 concentrations were below the -- the standards.

8 MS. NIJMAN: Was there anything to
9 suggest that the lead in the two instances you are
10 referring to related to the Joliet 29 Station?

11 MR. MAXWELL: No, no. I don't have
12 any reason to suspect that that would be
13 connected.

14 MS. NIJMAN: Looking at slide 13 of
15 Exhibit 1702, your PowerPoint. What are you
16 identifying here?

17 MR. MAXWELL: So this is a bullet
18 list of the various different investigations that
19 have occurred through the years at the Joliet
20 station that were shown on the prior slide as a
21 visual. So this simply lists the various
22 investigations that were performed in more of a
23 bullet list.

24 MS. NIJMAN: And is this in

1 chronological order?

2 MR. MAXWELL: Yes, it is.

3 MS. NIJMAN: Turning to your next
4 slide, slide 14. Is this the first stage of the
5 investigation you listed on your prior slide?

6 MR. MAXWELL: That's right. In
7 1998, it was the first one in chronological order
8 that was -- that was performed.

9 MS. NIJMAN: And you have noted some
10 factors from this 1998 Phase II. Why was this
11 relevant to you?

12 MR. MAXWELL: Well, this was the
13 original -- this was the earliest information that
14 was gathered, and we summarize here that there was
15 a good number of borings, monitoring wells, and
16 surface soil samples that were collected,
17 including some sediment samples that were
18 collected.

19 So a good quantity of data was
20 collected. In particular, we felt that data from
21 monitoring wells, MW-3 and MW-5, was particularly
22 important.

23 MS. NIJMAN: Can you point those
24 out?

1 MR. MAXWELL: So MW-3 is located --
2 if you see the -- the north arrow pointing north,
3 it is off to the upper left from the north arrow.
4 That's MW-3.

5 And then MW-5 is located -- it's
6 located in the north -- northwest of MW-3. It's
7 the first monitoring well that's located northwest
8 of MW-3.

9 MS. NIJMAN: And the findings for
10 those wells you have listed on the second bullet
11 here?

12 MR. MAXWELL: That's right. So
13 Monitoring Well 3 and Monitoring Well 5, there
14 was -- there were groundwater samples that were
15 collected from both of those wells, and they were
16 analyzed for the eight RCRA metals, and those
17 concentrations ended up being below the Class 1
18 groundwater quality standards.

19 MS. NIJMAN: Do you know whether it
20 was Midwest Generation who engaged in this 1998
21 Phase II study?

22 MR. MAXWELL: My understanding, it
23 was not Midwest Generation. It was the prior
24 owner of the site was the -- as the one that

1 engaged the consultant that performed that work.

2 MS. NIJMAN: Is data from 1998 still
3 useful to you?

4 MR. MAXWELL: It's a data point.
5 It's part of the totality of information that we
6 are looking at. There is a report that documents
7 it. That report was generated by a -- what we
8 know to be a reputable consultant in the industry.
9 We recognize and acknowledge that 1998 is not the
10 same as 2023. However, it's -- it was part of our
11 evaluation in terms of the overall assessment that
12 we made.

13 MS. NIJMAN: How did the data from
14 1998 have any relevance to the historic nature of
15 ash at Joliet 29?

16 MR. MAXWELL: I'm not quite
17 following.

18 MS. NIJMAN: Well, let me put it
19 this way. Now, Mr. Dorgan earlier mentioned how
20 long some of the stations had been operating.

21 What is your understanding of
22 how long Joliet had been operating?

23 MR. MAXWELL: Yeah. So, Joliet had
24 been operating since the 1960s as indicated in our

1 previous slide, and so the -- the groundwater
2 samples that were collected here, for example,
3 would -- would be representative of impacts,
4 because the potential CCR materials would have
5 been there for quite some time.

6 There would have been ample
7 opportunity for migration to have occurred to the
8 monitoring wells that were -- that were sampled as
9 part of this -- as part of this assessment.

10 Certainly sufficient time had passed since the
11 beginning of the station to when this data was
12 collected.

13 MS. NIJMAN: What were the
14 conclusions of the Phase II ESA as listed on your
15 slide 14?

16 MR. MAXWELL: So the conclusions was
17 that there wasn't a concern as it relates to
18 groundwater ingestion. It was pointed out that
19 there is -- there were no -- although in 1998
20 there wasn't an ELUC or a GMZ, in 1998, there were
21 no known potable water supply wells that would be
22 a concern. So that was the basis for that.

23 The industrial land use was
24 still -- it was still being used for industrial

1 land use as of 1998, and as a result, there was a
2 low potential for human exposure to constituents
3 of concern because of the industrial land use, and
4 then finally, under Illinois environmental law,
5 there was no -- no further requirement to further
6 investigate or remediate the property was the
7 conclusion in the Phase II.

8 MS. NIJMAN: Are you familiar with
9 an area referred to sometimes as the southwest
10 historic ash area?

11 MR. MAXWELL: Yes, I am.

12 MS. NIJMAN: And where is that on
13 this map? I imagine to the southwest.

14 MR. MAXWELL: That's right. It's
15 off to the -- so the southwest is the lower left
16 in that map.

17 MS. NIJMAN: Did this Phase II
18 provide data that was relevant to you regarding
19 the southwest area?

20 MR. MAXWELL: We did believe that
21 this information is relevant. Monitoring Well --
22 MW-3, we believe, is downgradient of at least the
23 northwest portion of the southwest fill area. So
24 when you look at the location of that well and the

1 fact that groundwater from that particular spot,
2 that northwest corner of the southwest fill area,
3 it's going to have an opportunity to laterally
4 spread out the mechanisms that we have talked
5 about before. The dilution, attenuation,
6 advection, dispersion is going to take place,
7 which is going to result in MW-3 representing --
8 samples from MW-3 representing an evaluation of
9 potential impacts from that -- that location of
10 the southwest fill yard.

11 MS. NIJMAN: And you already
12 mentioned in your second bullet on the slide the
13 results from MW-3.

14 Did you compare any of the MW-3
15 results with current Class 1 groundwater
16 standards?

17 MR. MAXWELL: Yes, we did, and we
18 found that the -- the results from 1998 meet
19 current Class 1 standards.

20 MS. NIJMAN: Turn to your next
21 slide, slide 15 of Exhibit 1702.

22 What does this slide represent?

23 MR. MAXWELL: So this is the -- the
24 2004 investigation that was a preliminary

1 investigation that looked at the viability of coal
2 combustion byproduct, or otherwise known as
3 beneficial use of CC -- CCR materials within that
4 northwest area of the station.

5 MS. NIJMAN: Is this the -- you were
6 here with Mr. Gnat this morning, and he referred
7 to a wind barrier of some kind.

8 Is your -- what is your
9 understanding with regard to this area and the
10 wind barrier?

11 MR. MAXWELL: Yeah. So, my
12 understanding is that this material was under
13 consideration for beneficial reuse to build this
14 wind berm, or wind barrier, that was discussed
15 this morning by Mr. Gnat. And so this 2004
16 investigation was simply the preliminary
17 assessment in order to evaluate whether or not the
18 CC -- a CCB approach would be viable.

19 MS. NIJMAN: You mention on this
20 slide the NLET analysis. And we have heard some
21 testimony about that already. Just briefly,
22 describe what it is.

23 MR. MAXWELL: So that's the neutral
24 leaching extraction test, and that is a test that

1 is required by the CCB requirements in the
2 Illinois Environmental Protection Act, and it
3 essentially is -- as the name implies, it's a
4 leach with a neutral pH, which is seven.

5 MS. NIJMAN: Turning to your next
6 slide, slide 16. What are we seeing in 2005 at
7 Joliet 29?

8 MR. MAXWELL: Okay. So in 2005,
9 there were some geotechnical borings that were
10 advanced, and there were a total of six. I guess
11 they were probes, and the -- this provided a --
12 kind of a back -- this was, as we understand it,
13 was Midwest Gen sort of trying to understand what
14 they had in terms of the characteristics of the
15 soils in the vicinity of the ponds as part of a
16 preventative maintenance.

17 There was consideration even
18 dating back to 2005 of install -- of evaluating
19 the condition of the liners and upgrading the
20 liners, and the char- -- the geotechnical
21 characteristics of the soils was a part of that
22 evaluation.

23 MS. NIJMAN: Turning to the next
24 slide, slide 17 of Exhibit 1702. This refers to a

1 second CCB investigation in the northwest area.

2 What do you mean by that?

3 MR. MAXWELL: Right. So, this was
4 following up on the 2004 CCB investigation that
5 indicated that there was some viability to -- to
6 the CCB approach, and so this was a more thorough
7 investigation of the CCB viability, or beneficial
8 reuse viability, and so it comprised -- it was
9 comprised of 15 additional Geoprobes, and again,
10 they collected composite samples of the vertical
11 interval from each of the probes and had those
12 composite samples analyzed for the NLET leach test
13 in accordance with the Environmental Protection
14 Act in order to evaluate the viability of the CCB
15 material.

16 And we have got the results on
17 this slide here as well, and the results were at
18 every location other than one, GP-14A, the
19 concentrations from the NLET result or testing
20 were below the Class 1 groundwater quality
21 standards, and the result for copper and lead at
22 GP-14A were above the NLET Class 1 groundwater
23 quality standards.

24 MS. NIJMAN: So, then, turning to

1 your next slide, what happened to the area around
2 14A?

3 MR. MAXWELL: So, again, additional
4 investigation and evaluation was performed in
5 order to delineate the extent of the material at
6 14A that -- that had -- that did not meet the NLET
7 Class 1 groundwater standards. And so they looked
8 at additional borings and probes, test pits,
9 north, south, east and west, of the original
10 GP-14A. They collected composite samples similar
11 to the samples from before and were able to show
12 that -- the extent of the materials that do not
13 meet the NLET Class 1 groundwater quality
14 standards was shown with a hatched area here
15 around GP-14A, and subsequently, they coordinated
16 a total of 52 truckloads of materials that were
17 hauled away to a permitted landfill for proper
18 disposal.

19 MS. NIJMAN: And why was this
20 removal of importance or relevance to your
21 opinions about Joliet 29?

22 MR. MAXWELL: Well, it -- it
23 demonstrated that there was a process that -- an
24 investigation process that was performed, that in

1 response to the investigation that specific
2 actions were taken in order to address the
3 conditions that were identified in the
4 investigation.

5 MS. NIJMAN: And what does this tell
6 you about the ash that remains in that area?

7 MR. MAXWELL: So, the ash that
8 remains in that area, it qualifies as -- for
9 beneficial reuse under the Illinois Environmental
10 Protection Act. The concentrations of the
11 constituents of concern are below the Class 1
12 groundwater quality standard as it relates to the
13 NLET testing.

14 MS. NIJMAN: And how does that
15 relate to your analysis of risk?

16 MR. MAXWELL: Well, it -- it
17 demonstrates that those materials are -- there is
18 not as much risk as if those materials had leached
19 and exceeded the Class 1 groundwater quality
20 standards. The leaching is of a benign nature.

21 MS. NIJMAN: Turning to slide 19 of
22 Exhibit 1702. What are you showing here?

23 MR. MAXWELL: So this is a summary
24 of the 2010 hydrogeologic investigation that was

1 performed by Patrick Engineering. Again, this has
2 been discussed here a number of times during
3 the -- during the hearing, but this was an
4 investigation that was before the CCR rules were
5 promulgated. It was voluntary, performed at the
6 request of the Illinois EPA, and it involved the
7 installation of 11 monitoring wells shown on the
8 diagram here on the right, monitoring wells both
9 north and south of the three ponds.

10 The -- the investigation
11 involved the collection of one round of
12 groundwater samples and the analysis of 11
13 potential CCR-related constituents, and we have
14 the results here on the slide also. The boron
15 concentrations -- and we mentioned boron, because
16 boron, we believe, is a key CCR indicator. So we
17 think that that's particularly important. The
18 boron concentrations in the groundwater were below
19 the Part 620 standards, the Class 1 standards, and
20 they did identify chloride that was present
21 upgradient above the Class 1 standard of 200
22 milligrams per liter.

23 MS. NIJMAN: You mentioned this was
24 done by Patrick. Did you have anything to do with

1 the locations of these wells?

2 MR. MAXWELL: No, no, we did not.
3 We simply reviewed the information and considered
4 it as we looked at the proper remedy.

5 MS. NIJMAN: In your review of this
6 document, which wells are the upgradient wells?

7 MR. MAXWELL: MW-11, MW-10, and MW-8
8 on north and northwest sides of the ponds are
9 upgradient.

10 MS. NIJMAN: And do you have an
11 understanding of whether those upgradient wells
12 are installed in ash?

13 MR. MAXWELL: I do. And they are
14 not installed in ash.

15 MS. NIJMAN: Looking upgradient from
16 Monitoring Wells 8, 10, and 11, we have heard
17 testimony from Mr. Gnat that that's a road.

18 Are you familiar with that?

19 MR. MAXWELL: Yes, I am. I have
20 seen it myself as well.

21 MS. NIJMAN: Could those wells have
22 been located any further upgradient, if you will?

23 MR. MAXWELL: No, they couldn't.
24 There is no space, because they are right up

1 against a -- a berm that abuts the highway. So
2 there is just no place else to put them on the
3 property.

4 MS. NIJMAN: You discuss in slide 19
5 that -- in your fourth bullet that 11 potential
6 CCR-related analytes were not detected.

7 Would you explain that?

8 MR. MAXWELL: So the potential
9 CCR-related analytes, those, as I understand it,
10 were selected at the -- under the -- under
11 discussion with Illinois EPA. They were the
12 constituents that would later become the 40 CFR
13 257 Appendix III and Appendix IV constituents that
14 are associated with CCR. So there is various
15 specific metals that are associated with -- and
16 other analytes that are associated with CCR as
17 promulgated by the regs later.

18 MS. NIJMAN: And then you mentioned
19 already that boron was below the Part 620
20 standards. Did that finding of boron generally
21 stay consistent over time?

22 MR. MAXWELL: It did. You know,
23 groundwater does -- it's dynamic, but I -- there
24 was a small number of instances historically where

1 boron may have possibly been higher or lower, but,
2 yeah, for the most part, it is -- it has been
3 below, consistently, the Class 1 standards.

4 MS. NIJMAN: You also mentioned
5 chloride when you described this slide. Have you
6 assessed the cause or the basis of chloride being
7 found at Joliet 29?

8 MR. MAXWELL: Yeah. We have looked
9 into that, the potential source of chloride, and
10 as was discussed here earlier this morning, the
11 highway to the north and northwest of the ponds
12 does -- it's documented to have received road
13 salt, calcium chloride being the primary category
14 or primary type of road salt. And so it seems
15 to -- to make sense the chloride and later the
16 calcium would be -- would be associated with
17 the -- with the road salt that was applied to the
18 highway there to the north.

19 MS. NIJMAN: I would like to show
20 you or ask you to turn to exhibit -- excuse me --
21 tab 4 in your binder. And this is -- has been
22 marked as an excerpt of Exhibit 1605, because
23 Ms. Shealey was going to discuss it. It is also
24 an agreed exhibit on our list of agreed exhibits

1 with the Plaintiffs -- or excuse me --
2 Complainants.

3 What is this document,
4 Mr. Maxwell?

5 MR. MAXWELL: This is an expert
6 opinion that I prepared related to the adjusted
7 standard that -- that is being sought for the
8 Joliet Station.

9 MS. NIJMAN: And if you would read
10 the date on it?

11 MR. MAXWELL: It is dated
12 March 21st, 2022.

13 MS. NIJMAN: And did you -- you
14 prepared this, you said?

15 MR. MAXWELL: Yes, I did.

16 MS. NIJMAN: Would you look at and
17 read the Bullet Point No. 2 on this first page,
18 read that out loud?

19 MR. MAXWELL: "Contaminant transport
20 mechanisms related to migration of chloride from
21 US Highway 6 located north of Pond 2 to the
22 groundwater monitoring wells."

23 HEARING OFFICER HALLORAN:
24 Mr. Maxwell, can you slow down a little, please?

1 MR. MAXWELL: I apologize.

2 HEARING OFFICER HALLORAN: Thank
3 you.

4 MS. NIJMAN: Let's try it again.

5 MR. MAXWELL: "Contaminant transport
6 mechanisms related to migration of chloride from
7 US Highway 6 located north of Pond 2 to the
8 groundwater monitoring wells located around Pond
9 2."

10 MS. NIJMAN: And is that the opinion
11 you were giving in this report or describes what
12 opinion you were going to give in this report?

13 MR. MAXWELL: Yes. That -- that set
14 the table for my opinion there that's presented
15 below that.

16 MS. NIJMAN: And in the paragraph
17 below, you refer to a different expert opinion.

18 What was that about?

19 MR. MAXWELL: Yeah. So there were
20 two opinions. There was an opinion -- this was
21 the subsequent opinion that was prepared in
22 response to information that was provided by the
23 Illinois EPA, and so this opinion here was
24 intended to be a response to that. The original

1 opinion was from December 6th of 2021, and I can
2 go ahead and read the major conclusion from that
3 December 6th, 2-0-2-1 opinion.

4 MS. NIJMAN: Yes. Thank you.

5 MR. MAXWELL: "Our expert opinion in
6 support of Midwest Generation, LLC's opinion for
7 adjusted standard, Joliet 29 Station, dated
8 December 6th, 2021 indicated that groundwater data
9 demonstrated that the groundwater is not impacted
10 by CCR that was historically in Pond 2, nor -- nor
11 indicative of potential sources of CCR outside the
12 pond. The additional information presented herein
13 in response to the above technical issues included
14 in the Illinois EPA recommendation further
15 supports WCG's analysis and opinions."

16 MS. NIJMAN: And just to be clear, I
17 think you said expert opinion in support of
18 Midwest Generation LLC's..." I think you said
19 opinion, but the word is "petition," right?

20 MR. MAXWELL: Petition for adjusted
21 standard, correct.

22 MS. NIJMAN: Yeah. And I would like
23 to refer you to Bates page 122708 in this
24 document. At the bottom of the page --

1 MR. MAXWELL: Okay.

2 MS. NIJMAN: -- there is a heading
3 that says, "Evaluation of Contaminant Transport of
4 Chloride." Do you see that?

5 MR. MAXWELL: I do.

6 MS. NIJMAN: What was the finding of
7 your analysis of the chloride at Joliet 29?

8 MR. MAXWELL: Our finding was that
9 the chloride -- the source of the chloride that
10 was identified in the -- in the monitoring wells
11 associated with Pond 2 was from the application of
12 road salts on the highway adjacent to the station.

13 MS. NIJMAN: You mentioned here on
14 the last line that Illinois EPA -- excuse me --
15 the first line under the heading you -- it states,
16 "The Illinois EPA and Midwest Gen previously
17 agreed in 2012 that exceedances of 35 IAC Section
18 620.410 groundwater quality standard for chloride
19 in groundwater at monitoring wells around Pond 2
20 are due to road salts applied to US Highway 6
21 north of Pond 2."

22 What was your understanding of
23 the agreement in 19 -- or 2012?

24 MR. MAXWELL: Yeah. So that was

1 actually cited in the Illinois EPA recommendation
2 regarding the -- the adjusted standard, and that
3 cited to -- so that was referenced by Illinois
4 EPA, and as I recall, that cited to a 2012 letter
5 that was between Midwest Gen and USEPA as the
6 basis for -- for that idea that the chloride is
7 related to the ponds -- or I'm sorry -- related to
8 the highway.

9 MS. NIJMAN: I'm sorry. You said
10 USEPA. Illinois EPA?

11 MR. MAXWELL: Illinois EPA.

12 MS. NIJMAN: And do you know
13 personally if -- or have you looked into whether
14 the City of Joliet uses calcium chloride on its
15 roads?

16 MR. MAXWELL: I have. I've looked
17 at their website.

18 MS. NIJMAN: And what does it show?

19 MR. MAXWELL: The website indicates
20 that calcium chloride is the type of road salt
21 that they use for -- for the roads.

22 MS. NIJMAN: Turning back to the
23 slide presentation PowerPoint at Exhibit 1702,
24 Slide No. 20. What does this reflect?

1 MR. MAXWELL: This is the
2 groundwater elevation contour map that was
3 included in the Patrick report on their initial
4 hydrogeologic investigation that shows the
5 groundwater elevation data from their initial
6 groundwater monitoring activities, and they have
7 contoured it in order to show the groundwater flow
8 configuration.

9 MS. NIJMAN: Looking first at your
10 first bullet, you state -- you have a discussion
11 about potable wells. What was that about?

12 MR. MAXWELL: Yeah. So they did
13 investigate the -- the presence or absence of
14 potable wells, and the -- the conclusions was that
15 no potable wells were located on the station
16 downgradient of the ponds that would be -- that
17 could be utilized as a source of drinking water.

18 MS. NIJMAN: And you noted depth to
19 groundwater. Why was that relevant to you?

20 MR. MAXWELL: That just gave us a
21 sense for how deep the uppermost groundwater unit
22 was, and we reference it here as 29 to 34 feet.
23 It -- that's getting pretty close to the -- to the
24 bedrock by that point. So that just gave us a

1 sense for the hydrogeologic setting.

2 MS. NIJMAN: On the top, right side
3 of this map in the northeast corner, what are
4 those contour lines showing?

5 MR. MAXWELL: So the way those
6 contour lines are curved, it shows a flow that is
7 from the -- what has been referred to later as the
8 northeast fill area there off to the northeast of
9 this map here in the direction of well -- MW-1,
10 and eventually MW-2 also.

11 MS. NIJMAN: And why was that
12 relevant to you to show?

13 MR. MAXWELL: Well, we are showing
14 an arrow here. Just hydrogeology 101 is the flow
15 is perpendicular to the contour lines, and so the
16 idea here is that these wells, at least for this
17 particular monitoring event, showed that MW-1 was
18 downgradient of the area that would later be
19 called the northeast fill area as part of the
20 record.

21 MS. NIJMAN: And did you see this
22 general flow more than once in your review?

23 MR. MAXWELL: We did look in the
24 record to see if there were other examples of --

1 of this flow, and we were able to find another
2 one, yes.

3 MS. NIJMAN: And do you recall me
4 asking Mr. Dorgan about his review of the Kunkel
5 testimony from the first part of the hearing?

6 MR. MAXWELL: Yes, I do.

7 MS. NIJMAN: And did you also have
8 the review -- opportunity to review some of
9 Mr. Kunkel's testimony from first part of the
10 hearing in this matter?

11 MR. MAXWELL: Yes, I did.

12 MS. NIJMAN: Do you recall if
13 Mr. Kunkel testified about the flow from the
14 northeast side of the station impacting these
15 wells?

16 MR. MAXWELL: Yes. As I recall,
17 Dr. Kunkel made a reference to what is shown on
18 this boring -- or I'm sorry -- this map from
19 Patrick in terms of the flow, on occasion, on a
20 transient case being from the northeast fill area
21 in the direction of pond -- of MW-1 and MW-2.

22 MS. NIJMAN: And what have been the
23 findings in MW-1 and MW-2 as to the contaminants
24 of concern for ash?

1 MR. MAXWELL: There haven't been any
2 consistent concentrations of CCR constituents of
3 concern above the Class 1 standard in MW-1 or
4 MW-2.

5 MS. NIJMAN: And why was this
6 groundwater flow direction from the northeast area
7 relevant to your opinions?

8 MR. MAXWELL: Well, there has been
9 mention of a lack of groundwater and monitoring
10 well and soil boring data from the northeast fill
11 area, and this was at least an example of an
12 instance where at least on a temporary basis, the
13 groundwater flow set-up that is shown here would
14 indicate -- would be useful in terms of looking at
15 MW-1 and whether or not the northeast fill area is
16 having a detrimental impact on the groundwater at
17 MW-1.

18 MS. NIJMAN: Do you recall whether
19 Mr. Kunkel said anything about what was done with
20 95 percent of the ash at the Joliet site?

21 MR. MAXWELL: My recollection was
22 that the testimony was that 95 percent of it was
23 not disposed at Joliet 29, but was taken across
24 the river to the Joliet 9 site and the -- the -- I

1 believe to the -- historically, most of it has
2 gone to the Lincoln Stone Quarry for disposal via
3 a pipe bridge.

4 MS. NIJMAN: How was that relevant
5 to the conditions at Joliet 29, in your opinion?

6 MR. MAXWELL: Well, that
7 demonstrates that historically minimal ash has
8 been -- has been managed in the ponds, and that
9 the majority of the ash has gone offsite. So you
10 are just -- you're just talking about a smaller
11 source volume, potential source volume.

12 MS. NIJMAN: I would like to refer
13 you to page 35 of the Board opinion, the interim
14 opinion from 2019. And we are going to put that
15 up on the screen, the second full paragraph on
16 page 35.

17 MR. MAXWELL: Is that Exhibit 1110?

18 MS. NIJMAN: No. This is the Board
19 opinion, which was up there at some point --

20 MR. MAXWELL: Okay.

21 MS. NIJMAN: -- but I'm not sure is
22 there anymore.

23 MR. MAXWELL: I'm not seeing it.

24 MS. NIJMAN: Yeah. We will have to

1 put it up on the screen. Page 35, second full
2 paragraph on the page. So if you would read that
3 second full paragraph from the opinion, starting,
4 "The environmental groups..."

5 MR. MAXWELL: "The environmental
6 groups provided a comparison of the median values
7 of boron and sulfate in the monitoring wells with
8 the 90th percentile statewide values from the
9 statewide database. The comparison indicated
10 exceedances of the 90th percentile statewide value
11 of boron in well MW-11 and sulfate in well MW-09."
12 And then it cites a citation. "All other wells
13 have no exceedances of either boron or sulfate
14 above the 90th percentile values."

15 MS. NIJMAN: Then, in the next
16 paragraph on the last line, what is the Board
17 saying about boron in MW-11?

18 MR. MAXWELL: They say that, "The
19 Board finds that given that MW-11 is an upgradient
20 well and no exceedances of the 90th percentile
21 statewide value for boring occurred in any other
22 well, coal ash stored in ash ponds or coal ash
23 deposits outside of the ash ponds at the Joliet 29
24 site are not the likely sources causing boron

1 exceedances in MW-11.

2 MS. NIJMAN: So then the Board goes
3 on in the next paragraph to discuss sulfate at
4 MW-9. Do you see that?

5 MR. MAXWELL: Yes, I do.

6 MS. NIJMAN: So let's go to your
7 slide 21 in your PowerPoint at Exhibit 1702. And
8 what does this document reflect, or this page of
9 your PowerPoint?

10 MR. MAXWELL: So this is an
11 investigation that was performed in 2020 by
12 Midwest Gen in response to the concentrations of
13 primarily sulfate and TDS that were identified in
14 well MW-09. That well stood out a little bit as
15 an outlier in terms of the overall chemistry of
16 groundwater quality at the Joliet site, and the
17 investigation was performed in order to try to get
18 a better assessment of potential -- the potential
19 reason for the sulfate and TDS concentrations that
20 we were seeing in that particular well.

21 MS. NIJMAN: And what was done as
22 part of the investigation?

23 MR. MAXWELL: So, a total of 18 soil
24 probes were advanced, and the soil samples --

1 samples of soil from the probes were analyzed for
2 sulfate, iron, and manganese. They also attempted
3 to take groundwater samples from temporary wells
4 as well, and I believe that those temporary wells
5 ended up being dry. So there was no groundwater
6 samples that were collected, but -- so that was
7 the -- that was what was done.

8 We discussed or looked at the
9 boring logs from this specific investigation this
10 morning. The results of the boring logs did not
11 identify any CCR materials in the boring logs.

12 MS. NIJMAN: There was some
13 discussion about the depths of the Geoprobe boring
14 logs. Do you recall that from this morning?

15 MR. MAXWELL: Yes, I do.

16 MS. NIJMAN: Do you have any concern
17 about the depths of the Geoprobe boring logs?

18 MR. MAXWELL: Yeah. I don't have
19 any major concerns. The MW-9 was advanced to
20 the -- to the bedrock. No CCR materials were
21 identified in MW-09. The fact that we weren't
22 able to get through the obstructions that were
23 identified in some of these borings, I don't think
24 is particularly material as it relates to the

1 other data that we have that shows what we believe
2 the source to -- of the TDS and sulfate at MW-9
3 is.

4 MS. NIJMAN: Well, let's go to that.
5 You mention in your fourth bullet, "pH of
6 groundwater in MW-9 is acidic."

7 Why is that relevant to your
8 opinions?

9 MR. MAXWELL: Yeah. So it is
10 acidic, and in some cases it has been
11 substantially acidic. It's important because that
12 stands out. As mentioned, the sulfate and TDS
13 stands out, but the pH stands out also when you
14 look at the rest of the monitoring wells, and it's
15 acidic, and the important part of that, I believe,
16 is that it -- CCR materials, if you look at the --
17 the neut- -- or the natural pH under the LEAF
18 tests for CCR materials, it's documented that it's
19 basic, not acidic.

20 So the fact that you have got
21 acidic pH was something that I think is giving us
22 pause right out of the gate.

23 MS. NIJMAN: And I can refer you to
24 page 37 of your expert report where you discuss

1 this investigation at MW-09. What were your
2 findings -- or what were the findings? Sorry.

3 MR. MAXWELL: So what we did was we
4 looked at -- we looked at the soils and what were
5 the sources of the soils there, and what was the
6 mineralogy of the sources of the soils there, and
7 the -- the source of the native soils there is the
8 underlying dolomite bedrock, and there was a
9 citation that identified that there are certain
10 sulfide minerals that are present in that
11 particular dolomite bedrock unit that -- and we
12 have seen, in fact, cobbles of that bedrock in the
13 boring logs in this vicinity. So that is just an
14 indication that this bedrock material is related
15 to these soils.

16 The sulfide minerals that are
17 part of these dolomite bedrock, when they are
18 exposed to oxygen as you can have when you install
19 a monitoring well and expose the soils to oxygen,
20 whereas previously they weren't before the well
21 was installed, that addition of oxygen to the --
22 to the soils ultimately results in a condition
23 where the -- it oxidizes the minerals, the sulfide
24 minerals, and that ultimately lowers the pH, and

1 the lower pH then subsequently mobilizes
2 other constituents that are naturally present in
3 the soil, and, like, sulfates, TDS, cobalt,
4 nickel, these constituents all present as
5 documented in the dolomite bedrock. Once you get
6 the oxidation of the sulfide minerals, as a result
7 of the low pH, it mobilizes these constituents,
8 and ultimately results in the presence of them in
9 the groundwater.

10 MS. NIJMAN: So I'm looking at page
11 7 -- 37 of your report in the second, full
12 paragraph, and the last sentence reads, Thus, the
13 sporadic sulfate and TDS groundwater
14 concentrations are naturally occurring in the soil
15 and are not due to station operations, including
16 the presence of CCR in the soil or from a leaking
17 pond."

18 Do you see that sentence?

19 MR. MAXWELL: Yes, I do.

20 MS. NIJMAN: Is that -- does that
21 summarize your conclusion?

22 MR. MAXWELL: Yes. I provided the
23 technical background the last few minutes, but
24 yes, that absolutely succinctly summarizes the

1 source of the TDS and the sulfate.

2 MS. NIJMAN: Do you recall
3 Mr. Quarles' opinion about this acidic pH?

4 MR. MAXWELL: I do.

5 MS. NIJMAN: And what did he say?

6 MR. MAXWELL: As I recall, it was
7 sort of a generic reference to acidic pH and these
8 types of concentrations of sulfate and TDS
9 typically being associated with CCR materials.

10 MS. NIJMAN: Do you agree with that?

11 MR. MAXWELL: I don't. As
12 mentioned, basic pH is much more typical of CCR
13 impacts as evidenced by the LEAF leaching data
14 that we have at this site, and so, no, I do not
15 agree with that.

16 MS. NIJMAN: So, in your opinion,
17 were any of the groundwater results -- excuse
18 me -- any of the results in the area near MW-9 a
19 result of CCR in that area?

20 MR. MAXWELL: No, no. We believe
21 that what's being detected in the monitoring well
22 there is related to the -- the oxidation of the
23 sulfide minerals from the dolomite.

24 MS. NIJMAN: And in your opinion,

1 did your investigation of MW-9 address the Board's
2 question about MW-9 sulfate?

3 MR. MAXWELL: I believe it did. I
4 think that the Board -- at the time of the 2019
5 opinion -- interim opinion, they -- that
6 information hadn't been collected yet, and so the
7 information that was collected in 2020 I think was
8 very useful and allowed us to -- to evaluate the
9 data and come to the conclusions that we were able
10 to come to.

11 MS. NIJMAN: Let's go back to your
12 PowerPoint Exhibit 1702 and look at slide 22.
13 This concerns -- the caption is, "Ongoing
14 Groundwater Monitoring at Joliet 29."

15 What are you showing here?

16 MR. MAXWELL: So as part of the
17 record, there is ongoing groundwater monitoring
18 that's taking place at the Joliet 29 Station.
19 There is a total of 12 monitoring wells that are
20 installed around the ponds, and there is multiple
21 groundwater monitoring programs that are being
22 implemented. There is the federal detection or
23 Appendix III constituents that are being
24 evaluated. There is the federal Appendix IV

1 assessment constituents that are being analyzed
2 for, and then there is also -- on top of that,
3 there is quarterly monitoring that's occurring in
4 compliance with the CCAs.

5 So this is just a summation of
6 the ongoing groundwater monitoring that's taking
7 place at the station as in compliance with these
8 various items.

9 MS. NIJMAN: Okay. Turning to your
10 next slide, slide 23. It concerns the northeast
11 historic fill area that we have had a bit of
12 discussion about already. What is the information
13 you had to assess this northeast area?

14 MR. MAXWELL: So this is what I
15 would call a -- kind of the sum accumulation or
16 the totality of the lines of evidence of total
17 information that we had at our disposal, a summary
18 of that. We have had a fair amount of discussion
19 this morning about the inspections that have been
20 occurring on a regular basis at the northeast fill
21 area.

22 So that's the first bullet there
23 is that a regular evaluation is performed as to
24 the top soil cover erosional features that might

1 be present in this area of this station. If those
2 erosional features are identified, there has been
3 discussion about addressing those issues and
4 correcting those issues, repairing those issues,
5 if those erosional features are observed.

6 There is no historical
7 observation of seeps along the river bank, as
8 testified to by Mr. Gnat. There is heavy
9 vegetation. I think that it was referred to as
10 quite a heavy jungle during certain times of the
11 year. And I can attest to that as well. I
12 visited that and saw that, and conversely, there
13 is a lack of stressed vegetation to suggest that
14 there is substantial harmful leachate or harmful
15 materials in the soils that would be affecting the
16 vegetation.

17 The sum total of information
18 relates to groundwater flow also. We talked a
19 couple slides ago about the flow in the Patrick
20 depiction of groundwater -- of groundwater
21 elevations, that there is flow from this area to
22 the vicinity of MW-1 at Pond 3.

23 And then this last bullet is
24 referring to the work along the Des Plaines River

1 that -- that was done recently last year
2 coordinated by the Corp of Engineers that involved
3 advancing some borings along the river bank, as
4 well as collecting some sediment samples from
5 the -- from the bank -- or the -- the surface of
6 the river.

7 MS. NIJMAN: Now, we heard this
8 morning -- also you mentioned the testimony this
9 morning. We heard that there is potentially --
10 there is some evidence of ash that Mr. Gnat had
11 identified in 2009. How does that impact your
12 opinion?

13 MR. MAXWELL: Yeah. That was part
14 of the record that we reviewed. That was part of
15 the totality of the information that we were
16 looking at. I believe in our deposition we didn't
17 dispute the idea that some ash is present there,
18 and the information that we do have, however, as
19 just outlined, we believe is sufficient to -- in
20 order to -- to arrive at the remedy that we have
21 put forth for the Joliet Station.

22 MS. NIJMAN: Is any ash in your --
23 can you provide your opinion about whether any ash
24 found means there is a source to groundwater?

1 MR. MAXWELL: Any ash found does not
2 indicate automatically that there is a source to
3 groundwater contamination. There has been data
4 that we'll discuss later at other stations where
5 analytical data shows that the concentrations are
6 actually below the TACO remedial objectives in
7 some instances where CCR has been logged in
8 borings. So that is dependent -- you know, the
9 chemistry of the CCR material that might be logged
10 in a boring is -- is one of the driving factors,
11 and so, you know, in many cases, the CCR material
12 could be mixed with soil, as an example.

13 If it's mixed with soil, the
14 quantities of that mixture is going to dictate
15 whether or not it's ultimately going to result in
16 a source or not. So you have got something that's
17 mostly soil with a little ash, you know, that's
18 less likely to be a source. The opposite would be
19 true for the opposite.

20 So it really is dependent on the
21 chemistry, and you certainly don't want to assume
22 that any and all CCR that might be present in the
23 boring is going to represent a source to
24 groundwater contamination.

1 MS. NIJMAN: And do you recall --

2 HEARING OFFICER HALLORAN: Can you
3 get closer to the mic, Mr. Maxwell, please? I'm
4 sorry.

5 MR. MAXWELL: Will do.

6 MS. NIJMAN: Do you recall
7 Mr. Gnat's testimony about that 2009 investigation
8 he did, what he said about whether there was a
9 mixture with soil?

10 MR. MAXWELL: My recollection is
11 that there -- in that instance, there was soil
12 mixed with CCR materials, yes.

13 MS. NIJMAN: You also mentioned the
14 heavy vegetation that you saw. Can you come to
15 any conclusions about soil cover based on the
16 heavy vegetation you saw in this area?

17 MR. MAXWELL: Yeah. So if you see
18 heavy vegetation, that typically is indicative of
19 a decent thickness of topsoil. The heavy
20 vegetation is going to -- it's going to need
21 topsoil in order to thrive. So the vegetation
22 suggests that there would be a sizable amount of
23 topsoil cover where there is heavy vegetation.

24 MS. NIJMAN: How does topsoil relate

1 to infiltration?

2 MR. MAXWELL: It's certainly not
3 a -- it's not considered an engineered clay cap,
4 but it -- it has the potential to minimize
5 infiltration, you know, depending on -- most
6 topsoil is comprised of a mixture, what we call a
7 loam of sand silts and clays. So, you know, the
8 loamier or siltier or clayier parts of the soil
9 are going to serve to minimize infiltration.

10 The way that it's contoured
11 sloping to the river is going to minimize
12 infiltration. So there are aspects of the cover
13 that are beneficial as it relates to, I guess,
14 separating the -- or minimizing the production of
15 leachate.

16 MS. NIJMAN: You were present for
17 the testimony of Ms. Shealey in May, I believe,
18 correct?

19 MR. MAXWELL: Yes.

20 MS. NIJMAN: And did you hear her
21 discussion about the Army Corp project to protect
22 from Asian carp?

23 MR. MAXWELL: Yes, I did.

24 MS. NIJMAN: And what is your

1 recollection of her discussion about the material
2 that was in this northeast area?

3 MR. MAXWELL: As I recall,
4 Ms. Shealey's information was based on discussions
5 with the Corp of Engineers who coordinated that
6 investigation that we were speaking about, their
7 impression was that that material along the river
8 bank there was related to dredge, dredged
9 spoilings from prior dredging along the river.

10 MS. NIJMAN: In your role as an
11 expert in this matter, had you had other
12 opportunity to speak to Ms. Shealey about what
13 might be in this northeast area, or what she
14 understood was in this northeast area?

15 MR. MAXWELL: I have. We have had
16 interactions, yes.

17 MS. NIJMAN: And based on those
18 discussions, do you have any understanding of
19 whether it -- well, there was -- do you recall the
20 discussions in the 1998 ENSR report you reviewed
21 about where ash from Joliet 9 might have gone
22 pre-1966?

23 MR. MAXWELL: I think there is --
24 the 1998 Phase II, it made an anecdotal, very

1 generic reference to ash from Joliet 9 coming to
2 Joliet 29.

3 MS. NIJMAN: And have you discussed
4 that question with Ms. Shealey?

5 MR. MAXWELL: Yes. And my
6 impression from that discussion was that that
7 would be operationally challenging; meaning, that
8 it just wouldn't be convenient, as I understood
9 it, to truck CCR material from Joliet 9 across the
10 river across the bridge near the the Brandon Dam
11 just because of the -- primarily because of the
12 haul distance. You would almost have to be doing
13 it on almost a regular basis.

14 It just wouldn't make a lot of
15 sense because of the haul distance, the nature of
16 that bridge. It just wouldn't be the first option
17 for -- for managing CCR materials on the opposite
18 side of the river, because it just isn't the most
19 convenient means to deal with it is my
20 understanding of her impression of the history.

21 MS. NIJMAN: And do you agree with
22 that impression?

23 MR. MAXWELL: It makes sense to me,
24 yes. The -- you -- in this type of an

1 application, you -- typically what's done is it --
2 it's dealt with in the most convenient manner.
3 You want -- it's the path of least resistance, if
4 you will. So, I mean, from a -- from a logical
5 standpoint, it makes sense that it would be a
6 challenge to continually truck the materials to
7 that -- to that location from the opposite side of
8 the river.

9 MS. NIJMAN: And, Mr. Hearing
10 Officer, it's 5:20. I'm moving into a whole
11 different area here. I can begin or --

12 HEARING OFFICER HALLORAN: Yeah.
13 Whatever you feel comfortable with or, you know,
14 I'm happy to quit now and continue to tomorrow at
15 9:00.

16 MS. NIJMAN: Okay. Let's do that
17 then.

18 HEARING OFFICER HALLORAN: Okay. We
19 are going to go off the record until tomorrow
20 morning at 9:00 a.m., and hopefully, I will
21 remember it's in 16-503. Thank you.

22 (END OF PROCEEDINGS.)

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I, KARI WIEDENHAUPT, do hereby certify that the foregoing was reported by stenographic and mechanical means, which matter was held on the date, and at the time and place set out on the title page hereof and that the foregoing constitutes a true and accurate transcript of same.

I further certify that I am not related to any of the parties, nor am I an employee of or related to any of the attorneys representing the parties, and I have no financial interest in the outcome of this matter.

I have hereunder subscribed my hand on the ____ day of _____, 2023.

KARI WIEDENHAUPT, CSR

A	89:22 103:17	161:23 216:11	103:10 119:12	260:19 273:10
A.D 1:18	180:6,11 322:7	adding 23:9 34:14	119:16,19	273:20 294:24
a.m 1:18 321:20	accurately 91:19	253:4	132:12 134:20	294:24 298:17
A.R 260:18	93:7 94:15	addition 33:16	134:22 146:5	agreeing 179:15
Abel 2:9 6:14	95:20 96:24	37:20 133:11	162:10,13	179:17
141:14 188:18	99:7,24 101:15	138:4,12 159:6	261:16	agreement 23:22
258:23 261:9	103:4	180:10 309:21	advanced 287:10	55:24 65:18
ability 246:1	acid 29:6	additional 33:2,22	306:24 307:19	66:24 164:5
able 9:4 48:4	acidic 61:13 308:6	63:7 68:24	advancement	178:10,15
67:21 92:6	308:10,11,15,19	70:16 71:22	242:7	179:12 276:23
104:10 112:12	308:21 311:3,7	88:9 187:1,10	advancing 315:3	276:23 298:23
118:20 145:4,7	acknowledge	193:12,13,20,24	advection 285:6	agreements
145:23 155:8	242:24 282:9	288:9 289:3,8	advise 138:7	212:10
181:14 211:10	acknowledgment	297:12	141:17 142:8	agrees 271:3
226:8 249:21	201:4	address 134:7	aerial 271:21	ahead 297:2
263:22 289:11	acquired 133:18	149:21 178:22	agencies 174:5	aid 85:13
302:1 307:22	272:8	199:12 200:15	agency 26:13	air 170:20,21
312:9	acre 60:19	201:5 239:16	169:14 174:11	alkaline 61:15
absence 207:19	acres 246:9	242:10 247:21	174:15 178:16	Allied 149:15,16
208:9 222:4	act 30:24 268:20	254:10,22 290:2	179:15,16	allow 7:15 19:4
240:10 243:12	287:2 288:14	312:1	199:24 211:22	55:7 133:14
300:13	290:10	addressed 248:7	213:1 242:23	140:5 201:10
absent 218:5	acted 16:4 58:6	addressing 213:2	Agency's 213:7	212:17 220:7
absolutely 112:16	71:9 213:8	254:11 256:16	ago 13:13 90:10	231:5 270:24
132:1 184:21	Acting 72:18	268:16,24 314:3	162:7 170:9	allowed 55:5
186:21 224:20	action 30:7	adequate 264:7	197:17 208:23	312:8
310:24	127:12 172:11	adjacent 15:14	210:12 215:10	allows 14:12
absorption 250:15	172:16 173:6,12	43:16,17 78:18	242:17 244:6	140:8 227:5
abuts 293:1	179:16 200:10	273:12,18	253:15 262:9	230:11,15
accept 104:2	200:11 205:8	298:12	314:19	alter 241:18
261:6	212:15 247:1	adjusted 187:3	agree 92:5 131:16	alternate 74:21
accepted 161:4	263:24	276:14 295:6	139:7 141:5	75:5,8,15,19,22
242:23 250:22	actions 179:18	297:7,20 299:2	179:9 192:18	76:1,5,8,14 77:3
accepts 199:24	211:8 212:11	adjustment 53:11	193:9 213:5	77:6,14 193:21
access 44:1 84:21	245:9 290:2	125:15,18 126:8	220:16 226:10	235:16,16
84:22,23	active 200:10	adjustments	226:10 256:7	alternative 127:20
accommodate	203:2 228:3	186:19	260:1,5,23 261:2	127:24 128:3,7
264:3	229:14,16	admission 48:22	262:3 263:9,12	128:15 248:16
account 213:8	activities 300:6	64:1 103:13	263:19 311:10	259:2,7
256:13	activity 13:23	159:19	311:15 320:21	alternatives
accumulating	actual 145:19	admit 28:2 134:18	agreed 7:6 9:23	127:16 130:8,21
25:16,17	213:5 254:3	261:7,12	24:3 25:19	131:23 132:4
accumulation	adaptive 241:21	admitted 5:6 28:8	55:10 76:22	133:8,9,11,16
313:15	add 106:17,19	28:11 35:24	141:15,16 163:8	134:9 170:4
accurate 48:10,11	added 160:14	49:7,10 64:7,9	211:20,22	256:5,10 261:5

<p>amount 244:17 313:18 317:22 ample 283:6 an@nijmanfra... 3:12 analyses 29:5,21 60:4 analysis 24:22 66:10 127:17 130:9 132:4 133:17,19 166:6 172:6 190:15,18 190:20 195:19 205:23 211:13 214:17 217:10 221:12 222:7,18 223:16,18 227:2 228:6 230:8 231:10 232:19 234:24 237:8 238:2,4 244:6 246:10 249:5 255:20 261:20 262:24 286:20 290:15 291:12 297:15 298:7 analytes 293:6,9 293:16 analytical 27:15 60:2 192:12 214:12 316:5 analyze 26:12 249:2,2 analyzed 25:8 60:24 65:19 279:6 281:16 288:12 307:1 313:1 anchoring 116:16 and- 2:7 and/or 209:4 ANDREW 3:5 anecdotal 319:24 angle 112:12 116:5 144:24</p>	<p>145:4 154:23 announce 74:3 annual 30:6 57:3 57:10 228:20 230:1 annually 228:21 anomaly 163:7 answer 39:13 48:4 77:8 86:5 92:6 155:8 225:5 231:21 249:21 263:22 answered 122:3 130:16 anticipate 195:20 196:1 241:10,20 anticipated 15:3 anticipating 197:16 anybody 75:13 265:6 anymore 304:22 anyway 131:9 apologize 296:1 apostrophe 89:4,5 89:8,9 100:21 apparently 139:1 appeals 7:13 appear 92:22 117:11 161:20 240:23 264:10 APPEARANCES 2:1 3:1 appearing 107:24 appears 76:2 82:13 94:17 100:3 110:3 132:2 161:19 appendix 29:19 29:19 74:23 75:1,3 130:20 189:2,3,7 219:15 219:16 223:10 223:11 293:13 293:13 312:23</p>	<p>312:24 applicable 208:11 227:3 231:23,23 257:14 264:14 applicant 273:18 application 16:6 16:10,14,18 17:2 17:14,15,22 30:16,23 31:18 31:20 32:1,2,8 32:15,19 33:19 34:6,6,9,11,17 34:21,23 35:10 43:12 57:14,15 57:16,18,20,23 58:9,14,18,19 59:1,10,11,14 69:4,5,9,10,12 69:17,23,24 70:8 70:11 71:3,4,6 71:13,15,16,20 195:13 256:21 266:7,16 298:11 321:1 applications 16:3 30:10,13 31:10 32:4,12 35:4,8 35:13 43:15 57:13 69:7 72:5 72:9,14,17 73:1 73:6 applied 66:1 201:21 204:19 204:23 208:13 240:11 243:14 294:17 298:20 applies 208:20 276:23 apply 170:2 195:22 196:3 200:18 207:20 207:22 209:5,11 209:22 210:23 211:10 246:10 250:8 266:3</p>	<p>applying 245:11 approach 62:16 62:21 63:13,16 81:21 84:6 143:17 173:11 173:14 174:16 204:4,8,13,14 205:9 208:18 218:8,9 222:9 225:4 231:22 240:4,13 241:19 248:16 255:14 271:5 274:12 286:18 288:6 approached 206:24 240:15 approaches 62:18 approaching 111:17 appropriate 165:13 169:13 169:18 172:16 183:1 204:18 206:10 210:9 226:9 245:9 247:20,24 248:24 253:20 267:22 271:23 272:2 appropriateness 268:23 approval 174:21 174:22 approve 261:3 approved 200:19 201:22 211:11 approximately 16:9 17:20 32:7 34:10 35:9,12 37:9,12 58:9,14 59:10,13 70:1,5 71:22 72:24 73:4 85:9 93:9 105:11,24 106:1 106:16 123:15</p>	<p>137:20 163:6 approximation 102:5 April 27:6 41:4 45:3 158:13 247:3 Aquifer 269:7 area 12:12,16 13:17,24 14:13 14:21 15:5 18:19 20:19,19 43:16 49:16 50:2,7,13,15 51:2,18,21 54:3 54:6,9,14 55:20 55:22 60:8,11,13 60:16,19 62:13 63:17,19 64:24 67:15 68:3 80:18,22 81:5,15 82:21 83:1,18,24 84:19,19 85:1 88:4,10,12,19,23 90:18 91:20 92:3,9,23 93:8 93:16,20 94:9,16 95:1,6,11,15,21 96:3,7,18 97:1 97:13,16,19,23 97:24 98:2,2,10 98:14 99:1,8,18 100:1,10,14 101:4,9,16 102:22 103:5 104:8,19,19,22 105:7,9,11,14,15 105:24 106:10 106:16,17,18 110:6,11,16 116:4,24 117:3 118:3,4,5,6,17 120:1,5,15,16,18 121:6,10,18,22 135:19 136:1,19 136:20,23 137:1</p>
--	---	---	--	---

137:6,6,8 148:4 148:6,10 150:11 150:13 157:1 159:6,7 160:10 160:11,14,15 167:18 177:11 207:20 216:24 272:13 273:6,8 278:6,9 284:9,10 284:19,23 285:2 286:4,9 288:1 289:1,14 290:6,8 301:8,18,19 302:20 303:6,11 303:15 311:18 311:19 313:11 313:13,21 314:1 314:21 317:16 319:2,13,14 321:11 areas 13:1,9 58:4 65:8 87:6 88:1 103:14 116:19 116:22 118:19 149:18,21 151:17 157:2 167:16 194:14 195:23 204:19 205:1 206:16 208:21 209:18 210:1,4,7,9 216:21 240:9 274:15 arguers 145:20 argument 139:17 248:15 Army 136:8,11 318:21 arrive 315:20 arrow 281:2,3 301:14 articles 246:13 ash 12:23 13:4,7,8 18:18 19:1 21:16 22:5,16,17	25:10 26:1,1 27:24 30:15,15 30:17,23,24 31:10,11 32:1,2 32:9,9 34:22,22 34:23 36:16 37:20,21,23 38:1 38:3 48:9 56:13 56:13 60:7,8,11 60:22,24 63:5 64:19 66:6 67:19 77:18,19 77:21,23 78:2,4 82:21 83:1,18 84:15,16 87:21 121:22 122:13 122:18 124:10 124:10 150:21 150:22 151:4,9 151:10,15,16,18 151:21,21,23 178:5 183:9,10 194:14 239:9,22 240:9 241:17 258:23 260:17 262:14 266:21 267:1 271:1 276:2 278:20,22 282:15 284:10 290:6,7 292:12 292:14 302:24 303:20 304:7,9 305:22,22,22,23 315:10,17,22,23 316:1,17 319:21 320:1 ash-like 25:18 Asian 318:22 aside 105:2 106:21 149:2 151:24 asked 42:14 53:18 60:15,21 63:14 132:8 142:23 153:9 165:10	194:24 asking 10:23 46:11 302:4 aspect 130:4 182:5 199:15 203:2 aspects 72:19 129:14 183:8 318:12 assess 169:16 182:7 224:19 230:15 313:13 assessed 232:12 294:6 assessing 182:6 204:8 245:8 264:14 269:22 assessment 29:17 127:12 146:7 171:19,22 172:8 190:23 206:10 211:6 223:10 225:1 238:12 240:15 252:15 253:6 255:18 260:2 261:19 282:11 283:9 286:17 306:18 313:1 assessments 239:14,15 assigned 6:5 assist 23:21 26:5 27:7 34:16 56:1 66:22 67:2 104:3 134:16 161:1 181:4 assisted 24:1 67:3 associated 22:20 34:1 55:8 62:11 68:16 76:20 136:7 273:11 277:7 293:14,15 293:16 294:16 298:11 311:9	association 121:7 assume 241:9 316:21 assumed 236:7 assuming 91:13 109:6,8 attaches 202:1 attained 273:2 attempted 307:2 attempting 266:3 attended 130:14 attending 72:22 attention 8:21 166:3 194:2 attenuation 202:18,18 231:6 242:5 247:1 248:7 250:16 251:10 260:14 261:1,3 285:5 attest 314:11 attorney 74:4 attorneys 322:11 attributed 254:8 auger 143:16 145:10,10,11,13 145:13,16 147:9 147:11,12 August 149:7,7 251:8 authenticate 42:1 authenticated 42:2 authenticity 49:3 49:5 automatically 316:2 available 71:1 109:17 193:14 207:24 210:6 213:21 219:5 224:14,16 226:11 237:1 253:13 259:15 267:16 277:24	Avelar 138:13 AVENUE 2:10 average 219:18,22 avoid 179:6,20 aware 175:4 197:10 278:8 <hr/> B <hr/> B 4:11 74:23 75:1 75:3 189:2,3,7 back 14:19 15:7 22:15,15,17 42:10 46:19 47:4 49:13 63:6 72:2 73:16 74:1 74:6 76:15 81:10 87:2 93:10 95:23 98:3,5 100:6 104:18 105:3 106:23 109:24 115:13 128:20 135:9,12 136:18 137:5,19,19 152:23 159:24 160:3,4,6,6 162:10 163:5 172:20 174:13 174:18 178:7 186:4 188:23 198:10 200:13 209:21 213:17 227:11 229:2 238:9 253:4 259:21 264:23 265:8,23 268:4 269:3 271:14 275:18 287:12 287:18 299:22 312:11 background 32:13 33:7,12,23 66:8 70:20,23 71:8 114:9 205:5 213:11,21
--	--	--	--	---

271:20,24 272:5 276:20 310:23 backing 223:6 BAHRAMIPO... 84:10 balance 174:14 ball 141:1 bandied 173:9 bank 102:7 111:6 111:7 113:5,17 114:2,23 115:2 121:15 154:20 154:24 278:16 278:22 314:7 315:3,5 319:8 banks 101:20 bar 49:5 bare 13:2 barges 14:12,17 barrel 143:18 barrier 286:7,10 286:14 base 19:24 20:14 37:7 38:7,9 39:14,16 46:14 46:14 54:14 based 20:8 25:14 29:9 46:5 47:10 47:22 60:23 61:1 102:4 106:4 158:11,13 172:13 173:19 182:10,17,18 187:3 196:1 220:23 261:13 317:15 319:4,17 basic 43:13 240:14,23 248:2 308:19 311:12 basically 19:2 22:6 33:6 50:24 56:8,10,11 58:6 59:5 60:16 61:19 81:13 85:2 200:3	219:10 247:18 257:9 259:10 266:14 basin 18:18,18,19 19:1 21:16 22:5 22:8,10,13,16,18 22:20 23:10 25:1,8,21,21 26:1,2,7,18 27:16,22 30:15 30:15,17,18,23 30:23,24 31:10 31:11,11 32:1,1 32:2,9,9,10,19 32:22 33:13,20 34:9,22,22,24 35:1,19 36:17 37:8,13,23 38:1 38:4,6,8,10 39:15,17 48:9,17 70:17 122:13,18 122:19 basins 19:2,8,9 33:12 35:8 124:11 basis 14:18 27:18 28:24 29:22 65:20 158:1 216:8 224:21,22 228:18 245:22 246:10 264:3 283:22 294:6 299:6 303:12 313:20 320:13 bates 9:24 10:1,3 10:8,11,15,15,17 11:2 27:2 36:6 40:17 59:19 76:2 79:8 82:13 87:4 93:11 96:1 98:5 100:6 105:4 109:14,17 110:3,18 113:23 114:17 116:2 247:10,11 251:5	258:13 297:23 bathymetric 25:6 25:14 bear 119:22 becoming 139:3 bedrock 79:18,20 80:5 120:10,24 121:8 148:4,5,10 148:20,22,24 300:24 307:20 309:8,11,12,14 309:17 310:5 began 181:10 238:18 272:7 beginning 46:13 83:17 90:22 91:1 181:15 283:11 behalf 6:13,19 7:4 184:24 190:5,15 believe 14:3,10,21 16:3,11 17:17 21:4,19 24:5 26:10 37:3,5,19 38:5 42:13 49:24 52:2 53:9 54:15,23 55:11 58:11 60:23 61:8,12 65:6 67:5 74:10,13 76:16,19 77:5,19 77:20 78:7 79:15 83:5 85:13 91:18 92:8 93:7 94:14 95:20 96:24 99:7,24 101:15 103:3 111:16,19 112:2 116:20,21 117:18 122:12 122:20 124:3 125:20,21 126:24 127:3,23 128:18 136:11 140:6 150:2,2	153:23 154:12 156:20 158:7 160:5 161:14 190:19 191:12 191:20 193:6 196:21 198:16 198:18 235:23 236:15 248:14 257:2 262:11 266:22 271:8 284:20,22 291:16 304:1 307:4 308:1,15 311:20 312:3 315:16,19 318:17 belongs 39:9 benchmark 37:2 beneath 52:13,16 56:12 65:12 247:13 269:22 270:6,15 beneficial 286:3 286:13 288:7 290:9 318:13 benefit 70:20 203:5 229:21 benign 290:20 berm 53:12 125:15 286:14 293:1 berms 78:8 best 75:4,7 145:20 182:16 206:2 207:24 208:12 247:21 256:21 257:14 better 180:15 306:18 beyond 38:12,17 39:4 272:16 bid 15:6 bidding 169:9 big 16:9 17:14 32:2 35:9 58:9	59:11 70:2 71:15 72:24 107:8 120:22 145:18,19,21 205:7 bigger 144:19 153:21 binder 11:1 16:12 17:17,18 58:12 59:17 64:14 70:4 73:3 74:16 107:1 146:16 166:8,13 175:14 180:2 188:24 198:11 203:14 257:21 265:5,7 294:21 binders 32:4 74:11 bit 18:22 19:6 45:6 60:20 67:21 84:17 111:5,19 112:13 115:2 125:22 141:10 148:16 154:18,22 155:12 174:13 178:24 180:13 190:10 193:16 193:20 200:16 200:17 203:23 211:4 215:2 216:8 223:8 237:11 251:23 272:11 306:14 313:11 black 159:18 160:14 block 106:16 blue 91:7 Board 1:1 6:4 37:19 39:7 74:4 76:24 85:13 104:3 133:22 134:1,17 161:2
--	---	---	---	--

161:24 162:3,9 191:8 209:7,24 268:15 276:15 304:13,18 305:16,19 306:2 312:4 Board's 37:18 134:10 139:6 165:11 199:6,7 205:2 255:2 259:22 267:20 312:1 boats 14:12,16 bodies 217:5 218:20,23 body 175:3 253:14 boiler 51:23 bolded 248:19,20 book 18:2 26:20 35:22,22 40:13 51:9 74:17 107:1 109:17 123:23 124:1 142:19 157:13 boring 18:16 20:8 60:15,24 62:24 79:1,4,8,10,21 79:23 80:5 143:5,21 144:1,6 146:23 147:1,8 147:19 278:22 302:18 303:10 305:21 307:9,10 307:11,13,17 309:13 316:10 316:23 borings 60:18,19 62:22,23 63:17 80:4,6,8,11 142:24,24 143:4 277:13 278:15 278:20,21 280:15 287:9 289:8 307:23	315:3 316:8 boron 291:14,15 291:16,18 293:19,20 294:1 305:7,11,13,17 305:24 bottom 10:1 11:2 37:23 40:23 44:23 48:9 52:14 61:22 88:13,15 92:13 92:13 122:18 143:21 150:21 151:1,6,16 158:3 198:17 204:6 235:10 248:19 269:16 270:1 297:24 boulder 144:17,22 145:19,23 156:11 boulders 144:20 144:21 153:22 154:19 155:15 boundary 83:21 84:20 86:21 87:6,11,13,14 88:11 105:10 230:24 231:12 231:16,22 232:4 232:10,13 234:12,20,22 235:2 box 90:13,14,16 92:21 94:3 95:13 96:16 97:11 98:20 99:16 101:5 102:18,21 167:6 167:14 boxes 135:14 Bradley 1:15 6:3 brand 22:19 Brandon 13:20 14:6 81:8	272:22 320:10 break 15:4 20:1 73:18,22 121:19 121:23 122:4 135:6 137:16 145:3 163:2 264:18,21 bridge 304:3 320:10,16 briefly 199:21 286:21 bright 115:19 bring 33:3,3 50:21 66:4 145:16,22 147:16 187:21 205:18 217:19 bringing 8:20 31:18,22 140:18 174:14 broadening 211:24 brought 32:24 129:15 131:11 148:8 212:3 240:2 brown 8:12 74:5 208:6 brownfield 170:3 174:6 183:18 185:17 201:17 208:6,7 245:14 245:16 251:17 brownfields 167:13,19,21 168:9,11,21 169:22 170:16 181:8,21 182:4,6 185:14,14 212:13 245:19 brush 115:17 Bugel 2:2 4:5 6:12 6:12 7:3,17,20 8:14,18 11:4,5 17:8 28:4,5 31:4 38:11,15,16,22	39:3 41:20 45:14 46:10,16 48:2,24 49:1 64:3,4,6 73:17 73:19 74:7,9 81:17 82:1 84:11 85:12 86:9,15,18,19 90:7 91:23,24 92:11 95:1,2,5,9 97:21 103:20 104:5,17 108:14 109:19 110:5 119:21 128:9,10 128:13 129:7 131:9,10,20 133:5,6 134:3,6 134:24 135:10 135:11 137:12 137:15,22,24 138:5,11 139:12 139:15,19 141:2 141:13,16,21 142:1,8 151:11 155:3 158:18,19 158:23 159:2,8 159:15 160:2,12 160:13 161:14 162:15,18 258:11 build 67:21 202:5 286:13 building 216:9 233:14 buildings 91:7 178:4 built 205:23 bullet 88:14,16,19 88:22 90:18 93:13,14,16 95:24 96:3,6 98:7,10 100:7,10 149:13 203:24 223:22 232:23 233:4 235:10	273:22 279:17 279:23 281:10 285:12 293:5 295:17 300:10 308:5 313:22 314:23 bullets 235:11 247:13 burial 82:21 83:1 83:18 burning 197:16 197:17,24 272:9 273:23 bushes 115:10 business 165:2 188:8 Bypass 26:2 30:15 30:23 31:10 32:1,9 34:22 byproduct 14:23 286:2 byproducts 176:19 243:22
C				
C 12:2,5 74:8 142:16 163:22 164:1 185:23 C021 36:4,9 37:6 calcium 15:23 16:1 294:13,16 299:14,20 calculation 33:24 calendar 197:19 call 42:21 57:5 67:23 82:16,17 244:17 260:17 313:15 318:6 called 12:3 37:3 144:20 163:23 167:8 170:22 226:23 301:19 callout 167:14 calls 155:3 campfires 81:12				

canal 65:5 120:21 157:1 canals 157:2 259:5 candidates 248:24 cap 127:21 128:1 202:11 203:1,1,4 203:8 228:2,22 229:6,19 318:3 capacity 164:19 capped 202:9 227:21 caps 229:13 caption 312:13 captured 258:9 carbonate-type 15:23 care 60:17 career 167:16 171:12 181:10 181:16 185:12 carp 318:22 carries 260:9 carry 195:11 carrying 235:11 carryover 235:8 case 6:5,6,7 38:13 38:18 39:3,4,5 45:5 55:19 61:10 90:1 138:23,24 139:9 152:16 175:5 178:17 185:3,3 197:2 226:8 246:6 252:18 257:18 262:11 264:11 276:8,13 302:20 cases 140:16 181:21 209:21 217:5 234:5 308:10 316:11 categories 248:13 categorized 236:16	category 168:17 229:19,22 294:13 cause 294:6 caused 77:3,15 causing 305:24 caveat 242:11 CC 212:12 286:3 286:18 CCA 26:10 29:3 53:19 179:5 194:12 200:23 212:11,20,22,24 275:18 276:23 CCAs 26:5,6 192:13 193:19 200:13,13 209:9 211:3,4,7,17,19 212:7,11,13 229:15,16 242:4 313:4 CCB 177:1 286:18 287:1 288:1,4,6,7,14 CCR 24:18 28:15 28:21 29:11 30:1,2 53:6,7 56:16,20,22,22 61:1,23 68:10,13 68:19,23 126:15 126:18,21,22 127:10 132:23 133:17 176:1,17 176:20 177:4,7 177:10 183:2,20 185:18,22 186:3 192:14,14 193:19 194:11 195:2,9 198:8 204:21 206:11 207:3,20 208:14 212:2 220:11,16 227:20 234:11 234:18 238:23 238:24 239:19	239:20 240:2 241:2,4,5,10 242:3 253:4,5,21 254:2 255:5 265:23 266:3,16 266:24 267:3 269:17 275:11 275:12,14 276:6 276:9,12 277:4,5 283:4 286:3 291:4,16 293:14 293:16 297:10 297:11 303:2 307:11,20 308:16,18 310:16 311:9,12 311:19 316:7,9 316:11,22 317:12 320:9,17 CCR-regulated 266:17 CCR-related 291:13 293:6,9 CCRs 177:15,20 239:5 cease 273:22 274:9 ceased 197:16,23 272:9 Center 1:5,16 central 35:6 52:14 CERCLA 169:24 170:9 208:8 252:5 certain 58:3 172:13 179:18 182:13,13 200:15 244:17 252:16 265:17 309:9 314:10 certainly 14:5 23:8 32:11 34:14 43:11,19 44:13 58:2 62:17 109:9	117:14 119:8,10 129:16 144:23 147:14 154:23 155:23 157:8 165:7 167:17 168:13 169:19 173:3 176:5 198:9 204:20 206:11 207:11 209:7,24 214:5 216:22 218:7 222:10 236:3 239:13 250:6 252:18 253:9 261:4 268:9 283:10 316:21 318:2 certifications 167:3 180:11 certify 322:2,9 CFR 223:9 293:12 challenge 321:6 challenging 320:7 chance 247:14 change 222:13 changing 239:8 Channahon 13:21 15:13,14,18 76:20 85:5 channel 13:19 81:4 84:20 101:22 107:10 110:21 111:20 111:24 112:6 118:6 120:20 124:12,13,14,16 124:17,18,21 278:18 channels 49:20,24 50:3,4,20 120:24 124:8,9,24 125:4 125:8 char- 287:20 characteristics 182:18 250:13	287:14,21 characterization 179:10 characterized 168:24 225:7 chart 216:6 274:20,23 275:3 cheat 215:18 checking 125:8 chemistry 306:15 316:9,21 Chicago 1:17 3:8 65:5 120:21 177:11,13,15,20 181:1,4 183:12 chloride 15:8 16:1 291:20 294:5,6,9 294:13,15 295:20 296:6 298:4,7,9,18 299:6,14,20 choose 39:8 62:14 176:6 chose 61:2 chronic 219:9 chronological 280:1,7 chunk 121:12 chunks 107:8 120:9,11,22 cinder 151:23 178:1,2 cinders 13:4 183:9 cindery 151:5 circumstances 250:4 266:1 citation 305:12 309:9 cite 189:8 cited 189:12 299:1 299:3,4 cites 305:12 citing 234:18 CITIZENS 1:7 city 177:15 178:6
--	--	--	---	---

183:11,14 299:14 civil 164:11,24 clarify 19:18 84:2 Class 281:17 285:15,19 288:20,22 289:7 289:13 290:11 290:19 291:19 291:21 294:3 303:3 classification 168:15 clay 18:10,15,20 19:11,22,23 20:6 20:13,15,19 23:5 157:9 318:3 clayier 318:8 clays 318:7 cleaner 162:9 Cleaning 18:19 30:18 32:19,22 33:13,20 34:9 35:1 70:17 cleanup 169:23 173:24 254:3 259:1 clear 17:20 76:13 98:1 117:20 162:2 177:18 297:16 clearinghouse 16:5,23 31:1,14 31:22 34:3 35:6 58:2,6 59:5 69:20 71:10 72:19 clearly 218:19 Clerk 8:5 client 184:24 187:21 188:7 close 92:10 120:10 148:22 234:22 235:1 239:3 276:16,17	300:23 closed 199:19 258:24 closely 165:21 closer 114:23 155:16 317:3 closest 40:6 41:10 closure 55:5 56:7 127:1,21 128:15 128:19 130:21 131:22 132:3 133:8,9,11,15,16 134:8,14 167:24 169:2 193:22 227:20,21 241:15 276:11 closures 177:4 Club 1:3 6:13 co-counsel 135:1 co-president 164:18 CO2 264:5 coal 14:23 15:4 52:1 121:19 176:19,22 178:4 178:5 183:10,16 197:16,24 272:9 286:1 305:22,22 cobalt 310:3 cobble 111:8,20 111:23 112:7,17 112:20 115:1 117:19 118:7 144:15,24 145:2 145:5,18 147:15 153:12 cobble-size 145:14 cobbles 110:19,22 111:3,10 112:9 113:1,13,18,21 113:24 114:13 114:20 116:2,6 117:6,10,12,13 117:16 118:2,15 119:3,9 120:4,16	120:17 143:11 144:4,9,11,16,17 144:23 147:14 147:16 153:21 153:22 154:13 154:20 155:15 155:22,24 156:17,19,20 157:6 309:12 collaborated 165:21 collaborative 213:4 collect 17:21 28:23 29:3,8 61:11,21 62:23 63:6,20 71:20 188:2 collected 60:8 182:11 187:2,4,7 192:16 193:21 209:13,13 223:1 253:8,17,18,22 268:8 278:11 280:16,18,20 281:15 283:2,12 288:10 289:10 307:6 312:6,7 collecting 71:21 211:18 253:23 315:4 collection 187:10 223:2 278:17 291:11 colon 82:19 colored 9:24 column 276:2 combination 206:19 combined 66:6 combusted 178:3 combustion 14:23 176:19,22 183:16 286:2 come 15:5 22:21	62:3 125:22 126:2 138:14,15 138:16 172:4,19 187:10 194:1 205:13 207:10 220:8 227:5 242:12 253:18 255:7 273:16 312:9,10 317:14 comes 22:16 189:4 201:13,14,14 comfort 174:15 comfortable 321:13 coming 53:7 55:9 69:21 71:11 72:19 121:10 138:2,7,8 140:19 140:23 196:14 206:8,14,15 242:11 268:4 320:1 comma 91:4 comment 138:1 138:14,22 139:7 187:11 commented 184:6 commenting 175:19 187:6 234:11 262:12 comments 174:18 174:19,19 178:8 276:2 commercial 13:22 65:9 272:16 commitment 23:22 55:23 66:23 178:9,14 179:12 195:10 276:23 commitments 178:21 200:14 committing 179:17 212:18 common 42:24	43:3 186:17 187:2 225:3 242:18 243:12 commonly 183:10 202:8 242:19,23 261:3,6 commonplace 43:4 communicated 75:14 127:20 271:2 communication 213:7 258:10 community 256:15 263:1 264:1 COMP_041681 258:13 COMP_041682 258:18 COMP_67366 247:12 COMP_67391 251:6 company 15:6 165:3 compare 252:7,10 285:14 compared 153:17 153:18 219:5 comparing 154:15 comparison 132:4 250:10 252:24 305:6,9 comparisons 206:22 219:14 219:20 compilation 277:12 Complainants 1:9 2:13 7:5 9:22 103:9 119:11 131:3 132:11 146:24 159:19 162:16 258:15
--	--	---	--	---

295:2 Complainants' 4:18 5:12 10:20 38:18 82:4 85:22 90:4 108:11 119:16 119:18 129:4 134:19,21 139:9 146:3 149:4 159:12 160:9 161:3,7 162:12 completed 72:15 169:11 238:18 complex 186:23 compliance 23:22 55:23 66:5,23 132:24 133:2,19 133:21 178:9,14 179:6,12,20,22 209:5 229:10 234:12 239:19 240:2 276:22 313:4,7 complicated 192:12 complied 200:18 269:18 comply 196:4 200:7,14 255:9 complying 26:6 195:8 component 25:10 176:22 177:16 183:3 composed 15:21 204:16 composite 288:10 288:12 289:10 composition 151:18 comprised 288:8 288:9 318:6 compromised 22:18 concentrated	167:18 concentrating 172:21 concentration 219:22 230:8,11 concentrations 172:17 217:20 219:18 230:16 231:8 238:7 244:20 245:24 250:17 279:7 281:17 288:19 290:10 291:15 291:18 303:2 306:12,19 310:14 311:8 316:5 concept 173:2 217:12 concern 207:2,3 262:20 263:11 265:20 266:10 266:19 267:10 267:16 283:17 283:22 284:3 290:11 302:24 303:3 307:16 concerned 184:16 259:11 concerns 168:3 178:22 184:14 213:3,8 262:10 262:17 307:19 312:13 313:10 conclusion 25:13 25:19 222:2 234:6 235:22 255:8 284:7 297:2 310:21 conclusions 227:6 240:23 283:14 283:16 300:14 312:9 317:15 condensed 204:2 condition 61:14	61:15 172:1,3 213:20 218:7 249:2,18 287:19 309:22 conditions 168:23 173:18,22 176:23 178:18 195:15 196:15 196:16 200:15 201:5,11 202:3 205:6 208:13 210:8 213:12 214:3 218:22 222:13 224:15 234:2 238:19 239:10 240:5 241:24 242:10 243:13,19 244:3 244:24 247:21 247:23,23 248:15 249:7 251:23 252:21 254:13,20,22 256:17,22 257:9 262:1 264:6 268:24 269:22 290:3 304:5 conduct 25:2 56:19 226:21 conducted 53:5 conducting 222:18 confer 135:1 confidence 228:22 configuration 300:8 confirm 49:3 78:12 84:8 92:12 113:20 119:3 conflict 207:4,10 conform 241:11 confused 86:3 161:10 connected 19:3,21	20:11 279:13 connection 121:14 consecutive 152:14 consequence 251:22 263:4 conservative 231:3,12 consider 29:20 133:22 165:11 168:10 169:17 198:9 220:12,16 222:12 229:15 241:7 244:11 255:19 259:15 261:4 264:13 267:15 268:13 268:14 considerable 253:13 consideration 206:17 207:18 253:24 268:9 286:13 287:17 considerations 211:16 248:4 249:24 250:20 257:11 263:24 considered 29:18 66:2 134:13 181:20 199:6 202:9 206:9 209:8,24 210:4 214:15 219:24 221:4 222:10,14 242:13 245:8 251:18 252:16 253:10 255:17 256:12 259:16 259:19 264:9 268:22 292:3 318:3 considering 78:14 235:24 240:5 consist 225:19	consistency 195:13 consistent 206:1 207:12 293:21 303:2 consistently 265:23 294:3 consists 79:1 constantly 186:24 186:24 constituent 230:17 244:7 constituents 23:13 62:6 77:2,13 177:23 192:17 219:15 223:7,9 223:11,12 224:11 231:8 284:2 290:11 291:13 293:12 293:13 303:2 310:2,4,7 312:23 313:1 constitute 200:6,6 constitutes 322:7 construct 15:3 59:7 constructed 122:5 construction 16:17,20 17:13 17:15,21 22:6,24 30:20 34:17,21 34:23 35:7 36:11 43:12,14 53:13,20 57:16 58:17,19 59:1,9 69:7 72:4,9,17 73:5 107:17 121:4,19 126:8 156:24 construe 267:12 consult 44:5 consultant 55:14 185:2 187:21 188:7,12 282:1,8
--	---	--	--	--

covers 56:11 130:20	171:18 180:2,3,6 189:4	280:20 282:2,4 282:13 283:11	134:2 161:2 195:5 210:20	demonstrations 193:22
create 179:21 252:15 270:20 270:23	CVs 166:16	284:18 297:8 300:5 303:10	decontaminating 276:17	demonstrative 90:9 103:19,21 104:3 159:4
created 83:12 158:8 189:17 191:13	D	308:1 311:13 312:9 316:3,5	decreasing 235:22	160:17,24 161:5
creation 191:13	D 4:1 12:2,5 142:16 163:20	database 253:19 305:9	deed 24:14 55:18 67:13 202:1	dependent 254:12 316:8,20
crest 41:2 45:2 158:12	163:20 164:1 185:23	date 7:8 158:6,7 247:3 275:23,24 295:10 322:5	deem 263:4	depending 22:3 61:20 144:24 169:20,20 196:16 318:5
crests 40:24 44:24 47:1,9,12,14,14 47:18,23 48:13 158:3,4,10	dam 13:21 14:7,8 14:8,9 40:6,20 41:3 44:24 46:6 47:24 81:6 107:17 121:5 157:21 272:23 320:10	dated 27:6 251:8 295:11 297:7	deepen 120:24	depends 82:7 89:24 231:17
crew 125:2,6	dams 14:11	dates 158:9 275:18	default 173:17,19 256:8	depicted 36:9 51:12 52:8
crews 48:16 122:21 123:2,14	darker 84:18	dating 186:4 287:18	Defendant 1:12	depicting 153:11
criteria 173:17,19 219:4,9 220:5 221:4 250:3,21 268:21 269:1,19	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	datum 37:4 45:7	define 196:8	depiction 314:20
critical 231:24 233:16 237:22 269:14	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	day 1:17 10:5 30:3 57:7 123:11 140:9 150:4 257:13 322:15	defined 61:1 239:7	deposeth 12:4 163:24
critically 237:15	dams 14:11	day-to-day 187:22	definition 225:23	deposition 315:16
criticism 237:13	darker 84:18	days 7:8 30:3 57:6 90:10 122:24 123:4,5,15	definitive 117:21	deposits 305:23
cross 36:15,15,22 73:18 104:22 141:14	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	DC 2:11	degrees 89:3,5,12 89:15,18,22,23 91:8 93:23,23 96:10,10 98:17 98:17 100:17,17	depth 300:18
crow 102:7,8	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	deal 213:6 228:16 320:19	déj 162:6	Des 13:19 14:13 65:4 81:4 87:22 101:20 102:5 107:5,13,18,22 110:23 120:20 272:18 314:24
crunch 91:11,13	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	dealing 177:14,16 178:6 201:7 228:13	delineate 289:5	depths 307:13,17
CSR 1:21 322:22	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	dealt 183:2 321:2	demonstrate 179:22 195:10 218:4 229:10 251:24 270:6 278:1	Des 13:19 14:13 65:4 81:4 87:22 101:20 102:5 107:5,13,18,22 110:23 120:20 272:18 314:24
cubic 63:10	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	December 297:1,3 297:8	demonstrated 173:21 195:7 218:19 254:8 289:23 297:9	describe 13:16 18:8 20:9 51:18 64:24 80:21 150:14 151:7,15 164:7 168:18 199:22 207:1 213:14 218:16 228:12 238:12 244:7 265:11 275:6 286:22
current 164:7 194:11 196:2 197:7,10,19 202:1 219:16 285:15,19	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	decent 317:19	demonstrates 290:17 304:7	described 135:24 244:5 274:13,24 294:5
currently 205:7 274:6 275:11 276:4,6	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	decide 182:16	demonstrating 249:6	describes 213:11 296:11
curved 301:6	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	deciding 134:1	demonstration 74:21 75:12,15 75:19 76:1,14 77:3,6,14,17	
CV 166:24 167:4 167:7 168:17	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	decision 188:8 210:14		
	data 27:15 30:4 40:19 47:5,7,8 54:16 57:6 63:2 71:22 72:19 182:7,10 187:7,9 188:3 193:20 209:12 211:18 211:18 214:17 214:18 215:2,3,6 219:6,19 222:16 222:18,21,24 223:2,3,14,15,23 224:8,13,13,16 224:18,21 225:1 225:7,11 226:2,5 226:10 227:2,7 232:19 234:8 235:17 236:5,7 236:14 237:1 253:8,13,16,18 253:22,22 259:15 262:2 267:15 268:1,7 277:21,23 278:9 278:17 280:19	decisionmaking		

describing 151:8	dewatered 22:6	256:20	319:4,18,20	215:14 246:24
description 31:1	22:11,13	dirt 151:3,19,20	dispersion 231:6	247:5,7,9 249:16
88:3 150:14	diagram 291:8	151:22	250:16 285:6	249:23 250:23
design 36:13	diameter 147:12	disagree 174:10	disposal 134:10	251:8 258:5
168:17 169:5	dictate 316:14	220:23	260:17 266:20	292:6 295:3
171:11,16 182:8	diesel 264:4	discontinuous	267:1,5 289:18	297:24 306:8
184:18 188:1	difference 103:15	18:17	304:2 313:17	documentation
designed 36:15	147:7 192:5,19	discovered 20:5	dispose 262:14	159:3
185:7	193:3,8 251:16	discuss 132:24	disposed 274:7	documented 55:1
designing 182:1	differences 176:5	216:12 218:15	303:23	209:19 240:9
186:5 224:23	different 24:23	260:18 293:4	dispute 315:17	276:7 294:12
225:9	29:15 53:22	294:23 306:3	disputed 21:8	308:18 310:5
desire 63:14	61:16 62:18	308:24 316:4	disregard 39:7	documenting
despite 155:10	86:23 87:13	discussed 12:11	162:9	118:22 156:7,8
detail 176:16	125:23 129:24	15:12 23:11	dissolved 23:15	documents 17:3
178:24 215:2	134:12 144:14	28:14 56:15	53:1,19 65:21	128:6 130:1
223:8 233:23	145:9,12 169:17	60:10 68:9	192:16 193:5	131:2,6 189:7,11
240:21	170:15 183:8,17	125:12,14	distance 114:1,3	189:17 193:23
detailed 60:16,22	183:18 185:15	130:11 131:12	320:12,15	246:14 249:23
194:24	185:18,18	133:9,10 135:19	distant 217:3	259:18 282:6
detected 244:22	202:13 222:23	150:9 240:3	distribute 81:18	doing 21:4 44:13
293:6 311:21	228:16 242:22	246:13 262:9	106:24 108:9	53:18,24 60:18
detection 29:16	255:21 276:7	272:11,23	distributed	61:21 62:21
223:9 312:22	279:18 296:17	278:12 286:14	159:16 161:15	63:16 68:12,14
determination	321:11	291:2 294:10	distributing 159:3	68:17,22 81:11
75:5,9,12	differentiating	307:8 320:3	divide 208:19	116:15 123:2
determinations	265:24	discussing 12:10	divided 165:18	125:3,8 141:9,13
209:2 210:12	differently 32:21	80:15 120:1	dividing 274:13	142:4 164:20
determine 14:22	90:21	131:14 149:24	divvied 165:18	169:11 179:13
77:2,13 255:1	difficult 225:4	215:9 234:13	DNR 136:11	179:14 187:18
268:22 270:4	245:15	discussion 12:13	docket 194:13	211:9 212:18
determined	diffusion 250:16	15:8,10 73:13	document 27:3,8	217:12 227:24
251:21	digestible 204:2	76:19 86:1	42:20 47:11	230:17 235:12
detrimental	dilution 285:5	109:21 156:19	59:16 97:16	235:15 320:12
303:16	diminish 244:20	184:3 186:14	103:13 118:19	dolomite 107:8
develop 224:19	244:21 245:2	192:9 224:2	118:20 129:9,12	120:10,22
226:2,6	direct 11:12 39:1	232:18 233:20	129:22 130:5,10	121:11,13 309:8
developed 59:2,3	131:10 141:9,12	238:16 250:24	130:19,24,24	309:11,17 310:5
128:21 183:3	direction 19:12,15	256:2 293:11	131:2,13,23	311:23
developing 221:6	19:17 52:17	300:10 307:13	132:1,17 133:1,7	dolomite-type
272:1	65:11 130:7	313:12,18 314:3	133:10,18,24	148:5
development 13:2	301:9 302:21	318:21 319:1	155:14,19,20	Don 8:11
developments	303:6	320:6	156:6,6,11	door 131:16
241:18	directions 154:1	discussions 52:19	189:15 190:21	Dorgan 4:8
deviated 166:1	directly 15:13,14	76:17 255:24	201:24 203:19	163:12 164:4,6,9

164:15 165:7,10 165:20 166:10 166:22 167:1,5 167:11,14 168:10,20 169:19 170:12 170:17 171:1,6 171:13,17,21 172:9 173:3,11 173:15 174:1,7 174:12 175:1,4,8 175:10,17,20,23 176:4,12,15,18 177:10,22 178:2 178:11,14 179:3 179:7,11 182:1 182:21 183:9 184:22 188:16 189:5,8,9,13 190:1,3,9,19,24 191:3,9,12,18,20 192:3,8,11,21 193:6,10,15 194:6,10,22 195:3,7,20 196:10,21 197:3 197:12,15,23 198:5,16,23 199:3,10,14,23 200:12 201:3,8 201:16 203:18 203:20 204:11 207:5,23 208:22 210:16,24 211:7 211:19 212:8,12 212:23 213:18 215:12,17 216:2 216:7,18,22 217:11 218:12 218:18 220:4,13 220:18 221:13 221:21 222:1,8 226:15,17 238:11,14 240:20 241:7	242:21 243:17 243:20 244:9 245:13 246:11 246:15,19,21,23 247:6,15,18 248:1,14,21 249:4,12,15,22 250:11 251:3,7 251:14,18 252:4 252:12 253:8 254:5,18 255:4 255:21 257:1,5 258:6,8,16,21 259:16 260:5,10 261:2,21 262:7 262:11,19 263:10,23 264:16 265:12 265:13,21 266:11,14,22 267:11,17 268:17 269:9,13 269:23 270:17 270:22 271:10 273:24 274:13 274:24 282:19 302:4 Dorgan's 180:2 dot 106:16 160:14 Douglas 4:8 164:4 dovetail 208:4 dovetails 172:10 downgradient 66:18 78:16 172:4 206:4,20 206:21 215:8 219:6,18 220:1 222:3 223:19 230:19,22 233:18 237:20 245:23 246:2 255:14 284:22 300:16 301:18 downstream 41:11 44:10,12	44:16 downtown 178:4 downward 227:10 227:12,13 234:4 236:8 238:8 dozens 185:16 Dr 191:17,19,20 258:24 302:17 draft 79:5 draw 85:8 106:15 drawings 36:11 drawn 60:6 dredge 50:12,12 50:14,20,24 51:4 319:8 dredged 50:1,22 107:21 108:7 121:16 267:7 319:8 dredging 50:13,13 50:16,18 107:5,9 107:13,22 108:7 111:24 156:21 319:9 Drew 6:19 drill 19:21 drilling 79:17 87:20 143:9,15 145:12,18 147:10,13 drinking 221:1 300:17 drive 7:23,23 81:10 174:20 driven 172:13 driver 205:7 drivers 204:20 driving 316:10 drop 22:1,12 drops 67:18 dry 148:1 307:5 due 234:7 298:20 310:15 duly 11:15 12:3 163:13,23	dumping 198:21 duration 221:4 dynamic 186:23 241:22 293:23 <hr/> E <hr/> E 2:2 4:1,11 12:5 12:5 74:8 142:16,16,16 163:22,22 164:1 164:1 E-L-U-C 24:6,12 e-mail 7:4,15 139:9 earlier 16:4 42:13 105:17 119:24 121:17 122:8 131:1 145:8 160:21 161:11 165:14 190:5 191:14 199:5 209:9,20,20 216:14 220:20 221:11 253:3 256:5 271:8 272:23 274:24 275:19 282:19 294:10 earliest 47:11 280:13 ease 203:16 easier 106:9 265:8 easily 16:16 73:7 east 13:20 18:22 25:20 26:6,18 27:15,22 52:13 53:12,12 54:3,3 54:6,6,10 55:2 56:12 57:21,23 58:21 65:5 84:17,24 118:10 124:11 125:15 125:15 152:17 153:5 154:19 272:21,22 289:9	east/southeasterly 52:17 east/west 36:14 eastern 124:11 easy 275:9 ecologic 205:12 ecological 205:11 214:9 economic 256:14 economically 170:6 256:6 education 180:6 180:11 effect 22:7 24:9,12 66:13 67:9,12 128:4 202:11 effective 228:4,24 247:3 effectively 248:6 effectiveness 203:8 effort 143:8 204:14 263:4 efforts 130:8 214:8 eight 26:11 33:12 33:23 34:12 70:24 72:2 111:3 117:5 144:18 187:8,9 188:2 281:16 either 87:19,19 112:10 115:20 118:3 145:21 196:15 209:3 265:16 275:14 305:13 electronic 7:7,9 7:21 element 198:6 211:15 214:14 221:7 elements 203:22 204:16 231:2 238:21
--	---	--	---	--

elevation 37:7,10 37:12 42:20 48:19 270:5 300:2,5 elevations 21:24 36:19,21,23 47:20 269:7,15 269:24 270:11 270:15 314:21 eliminate 217:22 elimination 274:8 ELPC 260:19 ELUC 24:5,6,11 24:12 54:16,19 55:8,15,16 56:5 56:10,10 67:11 232:2 237:19 273:9,20 283:20 ELUCs 209:11 243:7 emanating 196:17 embankment 67:23 113:7 114:16 119:7 120:13,15,18 152:16,18 153:19 156:14 156:15 emissions 264:5 emphasis 206:7 employed 164:10 227:17,19 employee 322:10 employees 37:20 employment 164:7 167:2 180:5 encounter 19:22 20:13 27:24 encountered 79:16,20,24 183:13 254:13 encounters 145:14 147:15 ended 56:8 60:18	139:16 166:2 201:17 281:17 307:5 ends 196:14 enforcement 6:6 engaged 281:20 282:1 engineered 318:3 engineering 128:22 146:8 147:19 164:12 169:12 291:1 engineers 136:9 136:12 181:3 278:15 315:2 319:5 enhance 275:21 ENSR 319:20 enter 178:16 179:11 entered 212:10 entering 212:24 entire 22:24 43:5 52:10 58:7 69:22 71:13 81:3,13 113:15 122:22 entirety 266:5 entitled 246:24 251:9 entrance 81:8 ENVIRONEM... 2:8 environment 1:8 182:10 240:8 243:10 environmental 1:4 6:14 24:5 54:20 55:7 56:2 61:8 67:4 74:5 164:11,20,23 168:3,23 181:1 201:23 248:11 268:19 273:9 284:4 287:2	288:13 290:9 305:4,5 envision 244:16 EPA 21:3,8 23:17 24:4 25:19 29:17 53:1,14,17 54:24 65:18 75:8,13 126:21 128:4 206:2 210:15,22 218:11 228:17 228:21 246:13 249:22 260:24 291:6 293:11 296:23 297:14 298:14,16 299:1 299:4,10,11 equally 89:22 erosion 87:20 88:10 erosional 156:7 313:24 314:2,5 error 198:19 ESA 283:14 especially 177:11 177:12 207:6 Essence 74:5 essentially 187:23 192:19 202:11 203:6 235:20 287:3 establish 24:2 42:2 133:24 established 37:2 40:22 41:23 42:18 43:1 46:11,18 60:14 61:10 66:8 67:7 80:1 133:7 199:17 207:17 238:14 establishing 56:1 204:17 establishment 70:22	estimate 17:5 114:6 149:19 171:10 257:11 262:21 estimated 103:15 estimates 131:22 132:4,8 Eurofins 60:3 evaluate 25:9 76:4 168:1 172:3 173:17 201:10 203:3 224:14 242:7 245:22 250:20 251:20 253:14,20 254:19 286:17 288:14 312:8 evaluated 195:14 223:7,12 233:17 237:21 242:12 250:10 253:24 312:24 evaluating 43:10 168:22 203:7 204:14 214:23 218:8 222:9 250:1 287:18 evaluation 78:11 170:4 181:22 182:5 198:6 202:24 206:4,19 214:7,17,24 215:7 217:13 218:15 221:17 222:3,16,18,21 223:3 228:20 231:3 235:1 237:16 238:22 239:12 251:22 252:24 253:1 254:9 255:13,24 256:10,20 257:8 261:22 263:1 267:20 282:11 285:8 287:22	289:4 298:3 313:23 evaluations 218:1 256:5 event 224:6 254:4 301:17 eventually 148:21 174:20 195:22 196:13 206:15 207:11,16 211:24 301:10 everybody 6:2 everybody's 74:20 82:10 evidence 5:6 13:4 28:12 49:10 64:10 68:8 81:11 119:20 134:23 150:17 150:21,22 151:3 151:23 162:14 253:14 261:17 313:16 315:10 evidenced 311:13 evident 111:21 Evidently 155:6 evolve 241:21 exact 245:11 Exactly 83:2 EXAMINATION 4:2 example 18:24 31:16 201:13 203:1,4,9 212:10 216:24 229:6 232:3 245:17 283:2 303:11 316:12 examples 260:16 301:24 excavate 50:20 262:13 excavated 50:22 excavation 51:1 exceed 217:20
---	---	---	--	---

<p>exceedances 200:4 298:17 305:10 305:13,20 306:1 exceeded 279:5 290:19 exceeding 220:5 excerpt 35:23 51:9 64:16 84:7 124:2,4 135:13 135:18 146:3,6 159:17 160:3 161:17 166:14 166:17 294:22 excerpts 49:14 exchange 212:19 exchanged 190:14 excluded 262:23 exclusively 177:1 excuse 10:13 15:4 17:1 27:19 41:8 58:23 59:8 60:12 68:21 69:10 70:6 71:18 104:2 146:16 147:2 149:7,17 154:9 211:18 252:9 294:20 295:1 298:14 311:17 executed 182:15 exhaust 264:5 exhibit 4:13,18 5:1,7,12,16 9:21 18:7 26:19,22 28:2,8,10 35:22 35:23 40:8,17,18 41:12,13,16,17 42:11 44:4,8,21 45:23 46:18,18 46:24 47:5,6,17 49:8,14 51:10 59:18,20,21 64:7 64:8,17 74:15,20 78:23 79:1 80:13,16 81:14</p>	<p>81:19 82:3,4 84:7 85:9,15 87:3 88:14 90:5 90:9,11,18 92:13 92:18 93:10 94:3,6,22 95:15 95:23 96:14,18 97:11 98:4,21 100:6 101:4,9 103:8,10,19,24 104:3 105:4,18 106:10,22,24 107:1,2,6 108:10 108:12,15 109:3 109:5,8,9,16 119:12,16,19 123:18 124:2 129:2,2,5 132:12 134:19,22 135:13,17,19 136:3,14,19 142:21 146:4,16 146:17,24,24 149:4 150:9 152:2,2 153:6,14 154:14 157:19 158:5 159:13,16 160:4,10,17,18 160:20 161:4,5,7 161:17,20,22 162:10,13 166:17,19 189:2 189:23 203:10 203:17 213:13 215:23 218:14 221:16 226:13 232:16 235:4 246:18,22,23 247:11 251:1,5 257:22 258:1 259:9 261:8,13 261:15 263:7 265:4 268:12 269:4 271:12,14 274:23 277:9</p>	<p>279:15 285:21 287:24 290:22 294:20,22,24 299:23 304:17 306:7 312:12 exhibits 7:7,9,21 8:2 42:3 48:22 49:3 74:12 83:24 85:19 157:16 158:20 162:8 196:15 294:24 exist 209:14 214:22 218:22 225:12 240:5 245:16 existed 20:6,7 205:6 existing 224:18 256:22 258:23 259:1 expanded 56:2,4 56:10 expect 22:19 112:6 113:2,8,18 118:3 expectations 248:2 expeditious 63:15 expeditiously 60:21 62:20 experience 48:12 89:21 167:13 168:19 170:23 171:4 174:3 175:22 176:1,17 176:24 181:7 182:1 186:4 201:6 202:6,22 212:6 228:13 245:10 249:14 expert 108:1,6 136:14 166:15 174:24 175:11 175:12 189:23</p>	<p>190:4 191:21 198:10 199:4 213:16 221:10 221:15,18 224:1 232:15 233:20 240:17 258:14 262:5 265:3 268:12 271:13 274:19 277:18 278:12 295:5 296:17 297:5,17 308:24 319:11 expertise 59:4 167:9 experts 9:2,7 188:16 226:7 259:14,17 explain 50:17 156:5 165:17 183:5 241:5 293:7 expose 309:19 exposed 87:20 151:3,20 309:18 exposure 171:8 211:14 221:5 284:2 exposures 205:10 205:15 243:9 express 89:17 expressed 89:14 90:20 91:8 extended 22:11 extension 7:6,12 extensive 253:19 267:15 268:2 extent 177:8 205:13 206:13 225:11,15 239:22 248:23 267:19 268:5,5,6 289:5,12 extraction 286:24 extremely 61:13 61:14</p>	<p style="text-align: center;">F</p> <p>facilities 198:3 223:24 227:3 272:16 facility 44:15,16 83:22 87:7 88:11 105:11 171:23 252:21 facing 111:12 154:6,7 fact 22:20 23:5 25:10 27:22 67:19 108:3 145:6 155:14 200:12 209:9 211:12 235:24 239:10 240:3 242:4 274:2 285:1 307:21 308:20 309:12 factor 212:22 factors 248:3 264:14 268:14 272:4 280:10 316:10 facts 46:11 failed 237:6 268:14 fails 267:15 fair 82:9,9 116:23 313:18 fairly 54:11 60:14 63:22 67:18 68:6 121:8 154:23 Faith 2:2 4:5 6:12 fall 66:2 137:1,8 155:7 173:18 208:7 210:13 229:18,22 248:13 252:17 275:14 fallen 201:9 falls 20:22 275:15 familiar 25:21</p>
--	--	--	---	--

39:19 108:19 109:3 110:7 129:8 173:10 178:9 202:17 247:5,6 284:8 292:18 familiarity 259:10 far 73:4 102:5 114:6,7 117:22 140:18 162:7 221:5 259:11 278:6 farther 6:9 fashion 201:10 203:23 fast 19:5 20:21 23:8 fbugel@gmail.c... 2:6 feasibility 256:24 257:4,5 feasible 170:6 182:14 246:7 feature 156:8 features 271:22 313:24 314:2,5 February 27:17 27:17 146:8 fed 206:12 federal 24:18 28:15,21 29:7,15 29:20,23 32:23 33:9 53:6,7,11 53:22 56:16,19 56:22 57:2 65:24 66:3,5,8 68:10,13,14,15 70:19,20 78:19 126:15,18,22 127:2,4,11 128:3 128:7,16 171:9 173:5 183:20 192:13 193:18 194:11,15,15 195:2,9,21	204:21 206:3,15 207:3,8 209:4 210:3 212:2 221:1 234:18 266:4 275:14 276:11 277:5 312:22,24 feed 34:5 feel 195:12 226:5 233:16 255:6,10 321:13 feet 37:15,22 38:9 39:16,18 41:4 45:3,7,8,9,10,12 45:19 46:3,8 48:1,8,18 79:10 79:14 81:2 84:5 92:15 93:2 94:19 97:6,8,9 99:13,21 102:1,9 102:10,15 105:11 106:5,11 114:10 122:17 144:4,5,8 147:5 147:20,23 148:13,20 150:15,15,16 156:13,13 158:13 300:22 fell 209:21 felt 207:23 208:11 215:18 222:4 223:16 226:7 241:23 242:8 256:21 262:20 262:24 266:14 267:3,11 268:2,6 280:20 fence 80:24 81:2 84:3,13,14 85:2 85:4,9 86:22 87:10 111:9,10 118:4,8,9,10 159:18 161:24 fenced 83:21	86:21 87:6,11,13 88:10 105:10 field 24:21 29:2,5 53:24 57:7 145:19 Fields 167:8 fifth 51:8 figure 52:6,14 54:2 277:17 figures 130:20 131:22 file 7:9,22 201:23 210:17,18 273:14 filed 175:6 filing 7:6 fill 121:8 148:7 177:13,15,20 194:14,14 195:17 205:1 206:16 208:20 209:18 210:4 225:1,10 284:23 285:2,10 301:8 301:19 302:20 303:10,15 313:11,20 filled 268:2 filling 225:22 filter 24:21 29:5 filtered 29:3 192:5 192:15,20 193:4 filtering 53:24 final 72:11,24 finalized 72:15 finally 10:16 206:9 210:5 284:4 financial 322:12 find 43:20 116:18 123:21 220:3 257:13 302:1 finding 196:12 255:2 260:6 293:20 298:6,8	findings 165:14 209:9 221:23 222:11 281:9 302:23 309:2,2 finds 305:19 fine 9:14,17 42:8 148:1 finish 9:6 87:17 152:15 finished 150:4 finishing 187:9 276:19 fire 183:12 firm 36:12 125:24 126:6,7,14 129:11 164:12 164:17 firm's 164:18 firms 58:5 59:4 129:15 first 7:2 12:3,22 18:6,9,14 25:16 35:24 38:2 44:11 47:18 66:7 79:7 83:16 83:16,18 87:3,4 90:12 93:13 129:19 143:21 146:5,10 149:13 150:1 161:13 163:23 166:12 166:23 172:21 173:13,16 181:11 183:8 191:22 196:8 204:4,17 213:22 214:22 221:14 223:22 224:6 232:17 238:22 255:22 260:20 265:19 280:4,7 281:7 295:17 298:15 300:9,10 302:5,9 313:22 320:16	first-hand 41:24 107:20 fishing 81:12 fit 168:15 195:5 253:6 five 47:18,20 62:22,22 73:10 73:12 87:6 88:1 97:9 114:12,14 123:4,5 135:1 139:11,12,15 144:18 158:9,10 162:7 227:8,15 flash 7:23 flies 102:7,8 flip 42:10 49:12 51:8 64:13 112:23 119:23 142:21 153:6,7 265:8 flipping 80:3 81:14 137:5 flood 14:11 43:2,2 43:10 flooded 37:21 flooding 38:18,22 flow 52:12,15,16 65:11,12 138:24 231:5 250:14 300:7 301:6,14 301:22 302:1,13 302:19 303:6,13 314:18,19,21 flowing 19:13 37:24 187:1 flows 19:16 fluctuate 22:3 fluctuations 22:23 23:1 focus 161:22 167:16,18 181:17 205:20 223:16 focused 115:15 155:16 166:4
--	--	---	--	--

215:7 271:9	144:17 150:7	front 74:11 82:2	38:19,23,24 39:9	41:13,15 42:11
focusing 48:8	165:15 168:8	105:19 123:21	39:11 40:11	56:16 64:1
166:2	170:13 182:21	124:4 129:1	42:4,5,9 45:17	68:10,13,18
FOIA 131:8	190:13 193:17	135:18 166:9	46:1,12,21,22	75:18 126:15
follow-up 179:18	195:15 196:20	235:4 246:17	48:7,20 49:11	136:16 150:9
followed 13:21	196:24 197:7	fulfill 53:20	63:24 64:11	168:8 189:22
255:10	199:18 200:15	fulfilled 66:19	73:9 86:3 91:21	196:2 200:14
following 282:17	204:8,15,23	full 29:18 61:22	97:15 103:11,12	204:10 207:22
288:4	206:11 207:12	139:20 149:14	103:24 104:12	210:12 211:5,8
follows 12:4	207:22 211:5,9	198:13 232:17	104:14 119:13	211:20 251:13
163:24 173:4	212:4 214:4	304:15 305:1,3	119:14 128:5	252:21 260:20
force 126:19,22	215:5 218:19	310:11	130:22 132:13	264:15 272:8
foregoing 322:3,6	220:6 222:5	fully 77:19	132:14 133:14	273:10,16,20
forever 229:8	224:10 225:15	fun 162:22	133:15 139:24	287:13 298:16
forgot 74:3	226:3 230:23	fundamental	142:14,17	299:5 306:12
form 89:18 167:23	232:9 233:4,4	182:5	150:19 151:13	Gen's 28:2 139:21
formal 83:1	240:19 242:1	further 18:22,23	151:14 156:18	general 18:19
185:15	249:3 253:2	45:6 65:8 81:10	158:15,17 159:7	51:23 62:8
format 204:2	254:24 255:18	110:23 111:6	159:10 160:9,17	77:13 167:15
former 13:23 19:1	256:22 257:19	112:13 115:2	160:19 161:8,9	169:7 182:23
30:17,24 31:11	260:3,13,22	137:12 154:18	162:2,19,20	183:13 204:4,8
32:2,9 34:23	264:15 265:17	155:12 158:7,15	Gale's 11:12	204:12 208:18
37:24 82:21	fourth 191:6	162:16 173:20	137:23	209:21 238:8
83:1,18 245:18	293:5 308:5	174:19 183:6	gamut 170:18	274:12 301:22
273:1	fraction 145:14	212:3 225:24	217:7	generally 28:20
forth 174:13	fragment 148:9	231:4,11 237:17	gaps 224:24 225:7	29:12 56:18
213:17 265:9	148:12	237:19 241:3	225:11 268:1	60:20 63:13
271:15 315:21	fragments 147:24	253:4 273:19	Garmin-type 89:1	79:18 116:17
forthcoming	148:3,3,14,15,23	284:5,5 292:22	gas 52:2 197:18	117:1 133:10
241:13	frame 210:7	297:14 322:9	273:23	150:3 152:13
forward 53:23	framed 213:19	future 168:5	gate 85:2,3 308:22	160:15 178:15
195:11 210:10	framework 61:9	194:18 202:2	gathered 280:14	197:12 212:19
253:21 255:7	134:12 172:14		gauge 40:5,7	220:2,4 233:22
265:8	176:1 179:21		41:10,11 44:10	234:3 238:7
found 74:23	196:3 199:24	G	44:12,15,22 45:5	241:1 247:5
183:10 220:4	204:18 207:21	G 12:2 35:22	45:6	249:7 293:20
238:7 285:18	207:24 208:12	163:20,20	gauges 39:20,22	generated 31:20
294:7 315:24	208:16,19 212:3	G-U-L-L-Y	39:23 42:14,16	58:2 130:1
316:1	240:11	150:22	42:18,23 43:7	189:17 190:11
foundation 42:3	frameworks	Gale 3:4 4:4,6	44:18 157:20,23	194:1 239:23
49:6 91:21,24	208:10	6:17,18,18 7:1	157:24	253:12 282:7
103:17 240:14	framing 261:23	8:4,9,13,23 9:12	gauging 40:19,21	Generating 27:5
foundry 243:23	FRANZETTI 3:2	9:15,18,19 11:9	44:14	272:20
four 39:18 73:6	frequently 177:12	11:19 12:6	Gen 28:15,18	Generation 1:11
123:7 138:6	178:5	17:12 27:1 28:1	37:20 40:16	6:20 24:4 48:21
		28:13 31:8		

50:11 53:13	255:2 305:19	157:13,22 159:5	81:17,18 82:18	144:15 148:16
55:6,10,10 83:7	gives 92:14 96:6	159:17 160:14	84:6 104:2	148:17
85:16 135:20	98:21 218:5	161:12,23 162:3	106:4,22,23	gravely 18:12,12
136:12 137:3,10	giving 296:11	162:22 192:4	128:4 130:23	great 11:6 213:6
165:15 182:21	308:21	193:3,15 196:7	140:5 144:20	green 273:6,8
190:5 208:24	glass 90:13 92:21	196:19 201:24	145:22 146:2	grid 62:14
248:13 252:8,11	94:4 95:14	216:14 222:22	148:22 152:3	ground 13:2 68:1
254:24 257:19	96:17 98:21	272:23 286:6,15	153:24 155:13	147:24 256:17
281:20,23 297:6	99:16 101:6	292:17 314:8	156:12 163:6	groundwater 9:7
297:18	102:19	315:10	167:23 168:12	15:8 18:10
Generation's 39:1	GMZ 199:22,23	Gnat's 86:10	168:12 178:7,18	19:12,13,15,16
58:22	200:8,9,11,19,21	317:7	182:8 191:4	21:2,12,24 22:1
generic 311:7	200:24 201:1,3,9	go 6:9 7:2 14:19	197:6 198:7	22:2,23 23:2,7
320:1	201:15 202:10	18:16 20:21	201:21 210:10	23:14,19 24:2,8
Gentlemen 163:9	202:24 203:6	39:4 42:5 43:20	213:1,5 214:15	24:8,17 27:4
Geodetic 37:4	211:11 212:19	43:22,24 44:1	214:21 215:19	28:23 29:8 30:7
Geologic 40:1	229:7,7 237:18	47:4 50:19	241:15,19,21	33:7 43:13,13
42:19	283:20	62:21 63:6 72:2	245:18 247:10	51:13 52:12,15
geologist 180:10	GMZs 199:17	76:10 84:17	250:12,13,18	52:16,20 53:4,24
geologists 181:3	201:7,22 202:6	85:3,22 104:18	253:17,19,21,23	55:1,20,21 64:18
geology 130:3	202:22 209:10	109:19 111:2,4	259:8,21 261:12	65:11,12,15,23
Geoprobe 79:16	211:12 227:17	119:2 122:21,24	262:1 264:2	66:7,9,12,20
143:8,14,14,15	227:18 229:1,3,5	123:9 139:4	270:14 272:21	67:6,9 68:15
143:22 144:22	243:6	145:15,20	278:3 285:3,6,7	69:2,3 125:3
145:1,2,9 148:12	Gnat 4:3 9:1,6,22	149:18 153:14	294:23 296:12	133:3 170:18
307:13,17	10:24 11:11,13	161:7 162:24	304:14 316:14	171:19,21,24
Geoprobos 288:9	11:18 12:8 18:2	173:20 188:7	316:15,23	172:1,2,5,8
geotechnical	18:4 28:14	208:15 231:9	317:20,20 318:9	184:17 185:6,10
164:11 165:1	35:15,22 36:3	232:11 238:9	318:11 321:19	185:16,21,23
287:9,20	38:2 39:12,19	252:14 265:8	goings 131:14	186:5,17,18,22
get-go 33:22	40:12,18 41:6,15	272:4 274:20	good 6:2 7:17	186:22,24
156:10	41:23 42:10	297:2 306:6	11:14 12:8,9	187:15 188:2
getting 43:15	46:24 49:12	308:4 312:11	63:17 86:18	193:20 200:1,4
114:23 144:19	51:7 59:20 61:5	321:19	206:1 218:5	200:22,23 201:5
147:16 186:9	64:12 68:9	goes 32:13 46:19	264:17 280:15	201:11,18 202:3
200:11 249:8	74:10 82:6	47:8 52:12	280:19	202:12 205:14
300:23	84:12 85:6 86:4	54:13 85:4	GP-14A 288:18	205:17,22 206:4
give 62:5 88:22	86:20 92:1	87:16,18 115:15	288:22 289:10	206:20 209:22
93:19 98:13	95:10 104:5,7,18	134:6,8 147:5	289:15	210:18 211:14
141:7 146:3	107:4 108:15	182:13 203:3	GPS 89:1	211:18,23 212:1
185:1 201:12	109:24 118:8	306:2	grab 135:17	214:10,10,11
240:18 247:9	119:24 129:8	going 17:8 18:1	graph 158:8	215:4 219:10
264:4 296:12	131:10 135:15	32:24 37:17	graphic 91:7	220:9,22,24
given 83:11 85:6,7	135:16 142:15	38:12,15,16	graphs 230:10,11	223:23 224:5,9
215:4 216:24	142:18,19 149:9	41:21 54:10,11	gravel 19:4 20:1	227:2 228:1

229:10,21 230:1	guidance 173:4	186:7,11 188:18	202:7 252:5	134:15,24 135:4
231:5,9 234:2	194:17 227:3	188:21 192:24	HDPE 275:20,24	135:8 137:14,18
237:19 242:7	246:14 249:23	228:10 236:11	head 23:9 145:5	138:3,10,18
243:16 244:1,15	guide 206:23	249:20 259:12	header 129:18	139:5,13,18
244:24 245:5,7	gully 150:15,22	259:20 261:9,11	heading 266:23	140:2,13,17,24
245:22,23 246:2	151:2,6,16	263:15,21	269:7 298:2,15	141:4,19,22
246:2 248:8	guy 8:11 226:18	264:19,23	health 182:9	142:2,6,11 146:5
249:7 250:14		295:23 296:2	240:8 243:9	150:1 151:12
251:11 254:4,6	H	317:2 321:12,18	248:10	155:5 158:16,22
254:16,17,19,22	H 4:11 12:2	hammer 143:19	hear 39:12 179:4	159:1,21 160:7
255:3 256:18	163:22	hammering	179:7 196:19	160:16,22 161:6
259:1 260:11,15	half 52:14	143:17,18	263:16,16	162:5,17,21,24
261:1,4 269:7,14	Halloran 1:15 6:1	hand 11:13	318:20	163:4,14,17
269:24 270:4,7	6:3,16,21 7:10	134:11,11	heard 191:24	165:14 176:10
270:11,15 271:3	7:18 8:7,10,15	163:10 322:14	192:4 196:6	176:10 186:7,11
273:13,15	8:19 9:10,13,16	handed 161:11	216:14,14	188:18,21 192:1
276:21 277:1,6	11:3,6,10,17	handful 63:17	286:20 292:16	192:24 194:5
277:13 281:14	17:10 28:3,6	handheld 89:1	315:7,9	220:20 228:10
281:18 283:1,18	31:6 38:14,20,23	handle 147:14	hearing 1:15 6:1,3	236:11 249:20
285:1,15 288:20	39:6 42:4,7	handled 8:1	6:16,21 7:8,10	259:12,20 261:9
288:22 289:7,13	45:15,21 46:20	138:22	7:16,18 8:7,10	261:11 263:8,15
290:12,19	48:3,23 49:4	handles 8:6	8:15,19,24 9:10	263:21 264:19
291:12,18	64:2,5 73:11,15	handy 274:20	9:13,16 10:20	264:23 278:13
293:23 295:22	73:20,24 81:22	happen 252:20	11:3,6,10,17	291:3 295:23
296:8 297:8,9	85:24 86:7,12,16	happened 24:17	17:10 28:1,3,6	296:2 302:5,10
298:18,19 300:2	91:22 92:5	65:23 66:12	31:6 35:24	317:2 321:9,12
300:5,6,7,19,21	94:24 95:4,7	138:20,21 154:3	38:11,14,20,23	321:18
303:6,9,13,16	103:11,18,22	214:13 215:21	39:6 41:20 42:4	hearings 76:18
306:16 307:3,5	104:1,9,15	252:19 289:1	42:7 45:15,21	hearsay 259:11,21
308:6 310:9,13	109:23 119:13	happening 20:10	46:12,20 48:3,20	heart 134:7
311:17 312:14	119:15 128:8,11	197:13 218:17	48:23 49:4	heated 178:4
312:17,21 313:6	131:7,15 132:13	happens 141:8	63:24 64:2,5	heavily 51:20
314:18,20,20	133:4,13 134:4	174:10 194:17	73:9,11,15,20,24	114:22 216:24
315:24 316:3,24	134:15 135:4,8	happy 321:14	81:20,22 82:3	heavy 217:6 314:8
group 164:4,10,24	137:14,18 138:3	hard 36:4 114:8	85:12,24 86:7,12	314:10 317:14
165:1,5 181:1,5	138:10 139:5,13	154:13	86:16 91:22	317:16,18,19,23
groups 305:4,6	139:18 140:2,13	harmful 314:14	92:5 94:24 95:4	height 125:21
guarantee 60:17	140:17,24 141:4	314:14	95:7 98:4	126:2
guess 104:10	141:19,22 142:2	hatched 289:14	103:11,18,22	held 72:12 322:4
120:19 146:10	142:6,11 151:12	haul 262:14	104:1,6,9,15	help 185:8 197:1
156:4 162:9	155:5 158:16,22	320:12,15	109:23 119:13	203:24
183:7 226:6	159:1,21 160:7	hauled 289:17	119:15 128:8,11	helped 184:18
235:15 274:3,8	160:16,22 161:6	hay 116:16	130:22 131:7,11	190:9 214:2,5
287:10 318:13	162:5,17,21,24	hazard 251:20	131:15 132:13	222:20 223:1
guessing 106:4	163:4,14,17	hazardous 185:19	133:4,13 134:4	helpful 215:18

250:7 265:6	293:24 297:10	81:2 84:5 97:9	267:21	132:23 133:17
helps 214:20	304:1,7	102:9,10 114:10	identified 10:7,7	170:3,24 171:4,7
Hennet's 258:24	history 156:24	hundreds 16:11	10:11 13:3,7,10	173:3,8,15 174:4
hereof 322:6	157:1 167:3	16:16,21 17:5,16	23:16 32:24	174:5 181:18
hereunder 322:14	168:13 180:6,23	17:23 32:4,16,16	84:16 87:6	191:8 199:7
high 38:8 39:15	196:1 207:12	34:14 35:11,14	88:10 90:17	200:10 201:7,17
48:13 61:14,20	277:15 320:20	58:10,16 59:12	92:3 127:24	202:8 206:12,14
63:6 68:1	hit 80:5 145:5,6	59:15 70:3,9	149:21 166:16	207:7 209:21,23
204:13 220:2	194:15	71:17,24 73:2,7	178:23 205:1	210:2,15,22
221:23 230:4,16	hits 145:1	171:14 181:20	238:20 245:12	212:7 218:10,11
233:22 234:1	hitting 143:11	Hutchins 10:21	265:14 290:3	219:2,9 220:21
238:5,6 240:18	145:2	10:21,22	298:10 306:13	227:18 228:7,13
high-level 265:14	holding 23:7	hydraulic 143:19	307:21,23 309:9	228:17,21
higher 19:6 23:4	118:16,21	hydraulically 19:3	314:2 315:11	242:19,19,23
45:9 294:1	holistic 255:12	19:20	identify 47:12	243:12,15
highest 41:2 44:24	hollow 145:11,19	hydroelectric 14:9	78:20 128:18	260:24 276:12
47:2,20 158:10	147:9,11,12	hydrogeologic	246:5 291:20	284:4 287:2
158:12	homogenous 63:9	23:18 146:7	307:11	290:9 291:6
highs 46:5	63:12	187:24 214:3	identifying 183:1	293:11 296:23
highway 272:17	honestly 128:21	261:24 290:24	214:8 245:21	297:14 298:14
293:1 294:11,18	hopeful 9:4	300:4 301:1	277:10 279:16	298:16 299:1,3
295:21 296:7	hopefully 104:11	hydrogeologist	IEPA 178:17	299:10,11
298:12,20 299:8	135:17 321:20	43:6	210:18,19,19	Illinois-based
hired 187:23	horizontally 63:18	hydrogeology	260:14	173:2
historic 32:13	Horton 10:22	130:3 301:14	II 83:5 239:15	image 91:16 94:12
44:23 45:2 47:1	74:3	hydrologically	280:10 281:21	96:21 101:12
47:12,14,18,23	hours 16:13,15,16	20:10	283:14 284:7,17	123:20
48:13 158:2,4,10	16:22 17:6,20,24	<hr/>	319:24	imagine 122:22
165:22 194:14	32:7,16 34:10,15	I	III 29:19 219:16	245:13,19
194:20 195:17	35:13,14 58:15	IAC 219:2 298:17	223:10 293:13	284:13
204:24 206:16	58:16 59:13,15	ID 4:12 147:10	312:23	immediately
208:20 209:18	70:5,7,9 71:22	idea 62:10 63:18	ill 9:3	51:23 78:18,18
214:13 238:23	72:1 73:5,8	225:18 229:7	Illinois 1:1,17 2:4	217:4 270:2
243:21,22	house 128:23	244:10 256:7	3:8 6:4 15:18	impact 171:19,22
255:23 274:15	housekeeping	299:6 301:16	21:3,8 23:17	172:8 187:11
282:14 284:10	6:23 7:3 137:22	315:17	24:4 25:19	195:19 201:18
313:11	142:12	ideal 141:6	29:11,17 30:1	211:13 254:8
historical 37:21	hub 31:13 34:3	identification	36:24 37:24	256:15 261:20
40:24 183:12	35:5 58:1 69:20	26:20,24 40:10	39:20 40:20	263:1,1 264:1,5
190:10,12	71:9 72:18	40:16 41:13,19	46:7 49:17	279:1 303:16
223:15 260:16	human 182:9	59:18,23 90:6	50:21 53:1,14,17	315:11
261:23 277:12	205:10,10,15	108:13 129:6	54:24 65:18	impacted 171:24
314:6	240:7 243:9	159:14 166:21	68:19,23 75:8,13	201:11 220:9
historically 178:3	248:10 284:2	189:1 203:12,17	76:23 126:21	297:9
205:6 237:7	hundred 39:18	257:22 258:3	127:10 128:4	impacting 302:14

impacts 172:5 283:3 285:9 311:13	inaccurate 103:13 inch 147:10 inches 144:18,18	178:20 182:17 224:13 245:21 250:9	150:7 187:23 188:1,1,4 300:3 300:5	219:1 271:4 303:12 317:11
implement 170:7 178:22	include 17:6 121:11 148:8	industrial 13:22 13:24 14:3,5	initially 138:5 165:10 272:7	instances 172:12 194:17 195:23
implementation 169:6	237:7 248:5	51:20 167:22	inner 147:12	213:24 217:3
implemented 201:4 202:10	included 66:14 131:24 158:10	168:14 181:7	inorganic 29:1 251:10	225:5 234:7
229:7 276:22	297:13 300:3	183:20 216:21	inorganics 23:16 24:20 53:2 55:2	238:8 239:2
312:22	includes 121:9 130:5	216:23,24 217:5	65:20 249:11	241:15 244:21
implementing 200:9 225:10	including 34:11 61:16 71:21	217:6 243:22	inputs 252:14	268:1 269:18
implies 287:3	170:18 177:2	272:13,16 273:1	inquiry 7:21	279:9 293:24
implying 267:13 269:17	280:17 310:15	283:23,24 284:3	inside 111:9	316:7
importance 236:19 289:20	inconsistent 270:8	industry 181:13 282:8	inspected 80:18 80:22	intake 13:19 26:17 49:24
important 133:16 185:20 211:15	incorrect 10:17 97:20	infiltration 318:1 318:5,9,12	inspection 81:1 82:22 87:5	81:4 101:22
214:7 237:15	incorrectly 10:7 10:10,14	influence 168:4	110:15 113:17	110:21,21
239:12 241:8	increased 144:4,9 259:6	inform 197:1 198:3 214:2,20	125:20,21 149:8	111:18 118:5
248:4 274:2	increasing 248:23	information 16:18 16:20 24:2 29:8	149:10 150:5,7	integrity 2:8 6:14 31:16
280:22 291:17	independently 222:12	34:4 43:4,18,21	152:9	intended 167:15 173:19 179:6,21
308:11,15	Indiana 177:2 181:18	69:20 71:10	inspections 12:16 12:20,23,24	198:1 203:5
impoundment 77:20 122:22	indicate 78:16 106:17 144:12	165:23 174:16	13:10 14:15	229:20 249:24
204:21	303:14 316:2	182:7 187:1,3,10	109:1 313:19	296:24
impoundments 69:3 208:20	indicated 27:21 159:17 255:23	190:14 193:14	install 33:2,22 70:15 187:24	intending 179:20 274:9
209:3 210:13	273:14 279:6	194:1 204:1	287:18 309:18	intent 276:17
215:15 216:1	282:24 288:5	210:6 211:24	installation 33:5 211:23 275:23	interaction 213:7
240:1,10 241:3	297:8 305:9	214:8 215:10,14	291:7	interactions 319:16
241:10,16 254:3	indicates 79:20,23 235:22 299:19	216:10 261:23	installations 72:2	interest 155:24 156:1 322:12
262:15 266:20	273:14 279:6	273:13 276:20	installed 55:14,22 66:3,17 68:24	interesting 181:13
267:1,4 269:17	282:24 288:5	278:2,11 280:13	71:7 185:11	interim 199:8 304:13 312:5
274:14,14	297:8 305:9	282:5 284:21	186:19 188:13	interior 37:7 113:4,5 114:15
impracticable 259:4 260:4	indication 20:17 54:12 80:4,7	292:3 296:22	275:24 292:12	152:23 153:1
261:20	156:21 249:8	297:12 312:6,7	292:14 309:21	interlocutory 7:13
impression 319:7 320:6,20,22	309:14	313:12,17	312:20	interpret 22:10 45:8 47:19
improving 234:3 249:7	indicative 217:21 297:11 317:18	314:17 315:15	installing 34:11 67:20 71:21	236:14
inability 49:2	indicator 291:16	315:18 319:4	instance 176:6 185:4 187:5	interpretation 21:9 130:7
	individual 35:2	infrastructure 264:6	208:11 212:16	
		ingestion 283:18		
		initial 30:16,16 52:23 56:5		
		57:14,16 69:4,5		
		69:8,12 71:8		

266:2	184:18 210:19	97:1 99:8 100:1	52:14 53:4	121:8,10,16
interpretations	222:17 278:15	101:16 103:5	54:14 62:7 65:3	122:4,23 123:9
20:8	278:16 291:6,11	105:10 110:11	69:20 70:17	126:4,5 128:2,14
interpreted 259:3	315:2	116:12 120:1	81:7 84:18	129:13 130:4,19
267:20	involves 177:15	136:5 162:1	111:22 114:8,24	130:24 131:3,4
interrogatory	iron 307:2	166:3 197:14,15	115:9 117:19	131:16 132:20
260:20	isolated 65:3	242:1 271:7,9,20	121:1 142:4	138:18 139:17
interrupt 106:8	issue 133:12 168:8	272:4,20 273:22	151:4 156:4	140:6,10,19
interrupts 138:24	173:7	274:16 275:2,7	163:7 167:19	141:22 143:6
138:24	issued 193:13	276:3 279:2,10	172:9,23 205:3	144:14,17 145:2
interval 288:11	215:21	279:19 282:15	205:23 207:13	145:17 148:16
introduce 6:10	issues 265:14	282:22,23 287:7	208:22 209:16	148:19,21,22
introduced 146:5	297:13 314:3,4,4	289:21 294:7	213:18 214:16	151:3 152:20
investigate 183:11	item 180:7 189:21	295:8 297:7	214:23 215:17	153:3 154:21
284:6 300:13	items 32:15 313:8	298:7 299:14	216:9 217:7,9	155:6 156:4,23
investigating	IV 29:19 219:16	303:20,23,24	226:20 243:18	161:12,13
183:14	223:11 293:13	304:5 305:23	256:8 270:21	171:22 185:15
investigation	312:24	306:16 312:14	286:7 287:12	198:6 206:1
23:18 25:3,5,13		312:18 315:21	313:15	210:1,21 212:18
54:21 56:6,7	J	319:21 320:1,2,9	kinds 186:18	214:18 225:24
62:13 169:4	J 258:21	judgment 228:2	Kingston 41:10	237:23 239:20
187:24 225:9,24	J.K 260:17	judicial 175:3	44:11,22,24 46:6	247:13 250:2
268:7 277:15	James 1:15	July 189:22	47:24 157:21	259:21 264:4
278:14 280:5	jars 29:6	258:22	knew 42:14,16	274:4 281:19
285:24 286:1,16	jaunt 191:24	jump 7:23	155:13 206:13	282:8 293:22
288:1,4,7 289:4	Jennifer 3:3 4:9	June 1:17 6:8	206:14	299:12 316:8,11
289:24 290:1,4	6:19	jungle 314:10	know 8:1,16,20,21	316:17 318:5,7
290:24 291:4,10	Jersey 177:6	jurisdiction 66:2	14:1,4 17:23	321:13
300:4 306:11,17	jn@nijmanfran...	66:15	20:3 22:16,17	knowing 38:7
306:22 307:9	3:10		32:11 33:10	39:14 62:7
309:1 312:1	John 189:22,23	K	39:7,8 42:3,22	114:24 120:23
317:7 319:6	221:18	Kari 1:21 74:1	43:2,17 46:14	143:7 148:4
investigations	joined 164:15	163:10 180:19	52:3 62:7,22	156:24
181:21 213:23	jointly 7:7 8:5	264:20,24 322:2	63:14,15 65:17	knowledge 15:20
214:2,14 239:16	Joliet 12:12 13:14	322:22	67:22 68:6	21:15 24:7 38:3
239:18 279:18	13:17 14:16,21	keep 142:9 186:8	70:18 71:7,10	41:24 50:6 67:8
279:22	15:9,15 16:5	271:13	74:2 75:6,10,17	75:4,7 107:20
invoices 210:22	17:15,21 23:12	kept 216:9 268:4	75:20 79:13,24	157:5 187:17
involved 30:19	24:16 28:16	key 262:22 291:16	82:17 83:3 84:1	197:6,14 210:15
31:15 107:12,13	31:2 52:19	kg@nijmanfra...	89:24 91:12,14	known 223:4
107:16 125:19	56:17 78:6,9	3:11	106:5 107:9	283:21 286:2
126:7,14 129:21	82:21 83:19	kicked 33:10	108:21,24,24	knows 8:17
130:3,6 165:1,24	87:7 88:11	212:2	109:7,10 111:16	KPR 16:3
169:3,8 172:2	91:20 93:8	kind 7:11 29:24	116:11,14,23	KPRG 16:4,14,15
176:21 182:4	94:16 95:21	31:13 35:5	117:20 121:1,4,7	17:21 21:1,2

25:2 27:7 29:12	284:1,3	leached 290:18	81:3,13 238:23	80:24 82:16,18
30:10 31:20	landfill 177:2	leaching 61:7,8,9	238:24	82:20 83:9,18
32:6,7,17 34:10	212:14 228:23	286:24 290:20	lens 115:21	84:3,13,14 85:10
34:16 35:13	243:21 262:14	311:13	let's 47:17 51:5	86:23,23 87:10
50:6,8,9 58:15	289:17	lead 166:5 181:22	63:16 100:6	118:10,12 136:4
59:14 60:12	landfills 183:17	279:4,9 288:21	140:3 149:10	136:5,7,9 159:18
67:2 68:12,21,22	183:20 185:19	lead-in 232:21	160:8 208:15	161:24 208:16
70:7 73:5 75:18	185:24 194:21	leading 17:9 31:4	214:19,20 238:9	298:14,15
87:5 123:20	202:8,14 227:20	45:14 48:2	277:8 296:4	305:16
129:18,18	landowner 202:2	151:11 192:22	306:6 308:4	lined 275:17
149:14 230:2	Landscape 149:17	228:9 236:9	312:11 321:16	liner 22:15,19
KPRG's 31:12,13	Landscaping	238:15 249:19	letter 82:11,18,20	46:14 270:23
35:3 57:24	149:15	263:14,20	83:8,16,23 92:3	275:20,21,21
58:24 69:18	language 248:19	LEAF 60:6 61:3,5	92:22 258:22	276:18,18
71:5,23 72:16	248:20	62:2,3 77:6,8,9	273:2,19 299:4	liners 207:15
Kristen 3:4 4:4,6	large 60:14	308:17 311:13	letting 20:20	229:15 269:16
6:18	132:17 143:11	Leah 81:18,21	level 36:24 37:10	275:16 287:19
Kunkel 191:2,16	145:1,5 177:2	84:6,8 85:7	37:16 171:9	287:20
191:17,19,20	245:14,20	135:13	173:5 174:15	lines 68:1 301:4,6
258:10,14,22	largely 193:7	leakage 270:7	204:13 207:8	301:15 313:16
262:12 302:4,13	266:23	leaking 22:10,21	220:3 221:24	liquid 61:20
302:17 303:19	larger 17:17 36:5	310:16	230:4,16 233:22	196:11
Kunkel's 261:18	121:12 143:11	learn 181:14	234:1 238:5,6	list 24:22 29:21
262:23 302:9	144:14,18	learned 138:1	240:18 252:8,11	52:24 53:22
	148:17	leaves 155:7	266:4	61:23 65:18
L	LASALLE 3:6	leaving 205:14	levels 19:6 21:13	168:16 171:19
L 163:20,22,22,22	lateness 131:1,4,6	led 164:23,24	22:1,2,7,12,21	189:3,7,21 191:6
L-E-A-F 60:7	laterally 285:3	211:22,24	23:3,4 47:2	200:13 217:8
lab 60:3 61:3	LAUGHRIDGE	213:22	61:16 122:12,17	232:23 279:18
labeled 41:14	3:4 4:4,6	ledger 209:17,18	123:10	279:23 294:24
101:4 275:10	law 1:4 284:4	left 44:23 99:17	liability 6:6 81:19	listed 61:23 167:3
labor 149:20	lay 49:2 248:1	147:14 158:20	98:4	213:15 260:8
laboratory 234:9	layer 18:10,20	167:3,7 211:3	License 1:22	275:2 280:5
lack 214:10 303:9	19:22,23 20:14	245:2 271:23	licensed 37:1	281:10 283:14
314:13	20:15,22 78:3	281:3 284:15	180:8,9	listened 194:4
laid 49:6	147:15	left-hand 90:14	light 13:22 187:11	listing 180:10
Lake 56:14 259:5	layers 78:5	92:20 94:4 95:6	limestone 120:22	194:9 233:3
land 24:6 54:20	laying 120:12	95:11 99:17	147:24 148:2,5,9	lists 279:21
55:7 56:2 67:4	121:13 240:20	101:6 102:19	148:12,15,23	liter 291:22
135:19 136:10	271:17	106:18 273:7	limit 234:9	literally 32:5,15
136:15 137:9	lays 271:23	legacy 168:2	limitations 142:5	143:18
173:19 196:14	leach 77:1,9,12	legal 134:12,12	145:17	literature 227:1
201:23 214:6	287:4 288:12	legible 11:2	Lincoln 304:2	little 18:22 19:6
217:1 272:10	leachate 61:11,21	109:18	line 10:6,10,14,17	29:15 45:6
273:9 283:23	314:14 318:15	length 80:17,22	41:21 56:9	60:20 67:21

81:9 84:17,21	locations 277:14	238:1 240:16	238:11,18	95:13 96:17
86:3 88:24 89:4	292:1	245:23 247:9,12	248:18 255:14	98:21 99:16
89:4 111:5,19	lock 13:20 14:7,8	251:4 252:14	256:12 257:9	101:6 102:19
112:13 115:2	14:11 40:6,20	256:2 257:20	264:9 265:10,18	main 203:22
125:22 136:15	41:3 46:6 47:24	263:24 265:3	270:1 271:16	204:16
141:10 148:16	81:6 107:17	272:14,21	274:14 276:1	maintain 49:1
154:18,21	121:5 157:21	284:24 295:16	277:20 279:14	50:23 200:24
155:12 161:10	272:22	301:23 308:14	282:6 292:15	maintenance
162:8 180:13	log 20:8 116:16	308:16 312:12	300:9 303:14	50:14 287:16
191:23 193:7	143:21 144:1,6	looked 44:19 62:4	310:10 315:16	major 297:2
200:16 203:23	147:1,2,19	68:4 106:6	looks 36:10 37:9	307:19
203:23 204:1	logged 316:7,9	140:7 150:24	84:21 95:22	majority 171:7
211:4 216:8	logical 321:4	160:1 193:12	99:10 103:6	234:7,8 236:1
223:8 237:11	logs 18:17 79:2,4	196:22 204:24	115:18 116:9	304:9
272:11 278:4	142:24 143:5,6	205:8 206:18	155:6	making 177:23
295:24 306:14	278:22 307:9,10	208:10 210:6	lose 232:1	178:21 220:21
316:17	307:11,14,17	215:6 219:2,18	lot 8:21 33:11	244:9 248:16
LLC 6:20	309:13	223:13 230:19	81:9,11 148:6	manage 168:23
LLC's 297:6,18	long 21:2 49:20	239:13 256:9	155:7 156:14	238:19 243:13
LLP 3:2	141:23 150:15	259:17 286:1	165:22 169:11	244:3
loading 244:13	162:2 168:13	289:7 292:4	186:2 225:23	managed 173:22
loam 318:7	200:7,17 215:3	294:8 299:13,16	268:7,7 320:14	200:2 212:5
loamier 318:8	239:6 244:14	307:8 309:4,4	lots 62:17 110:22	239:23 244:2
local 121:10 188:8	245:5 255:8	looking 37:6,11	154:24 155:1,11	255:11 304:8
188:10,12 264:6	282:20,22	40:23 44:4,21,23	156:11	management 24:3
located 25:24	long-term 168:2	54:2 62:9 65:10	loud 295:18	24:8 67:6,9
27:11 40:6	longer 24:21	67:14 75:3 76:1	low 49:5 61:13,20	203:2
41:10 51:19	55:13 139:2	79:7 87:3 88:13	63:3 181:20	manager 181:2
65:1 91:20 93:8	241:17 243:4	98:20 101:3,19	284:2 310:7	managing 177:24
94:16 95:21	244:22,23	101:24 110:18	lower 93:1 94:18	181:5 210:9
97:1 99:8 100:1	248:22 274:4	111:14 112:5,13	97:4 99:12,20	239:9 241:9
101:16 103:5	look 7:15 44:5,8	112:14 113:3,4,7	101:24 102:13	320:17
105:9,24 116:11	44:13 47:16	115:11,16	106:11 284:15	manganese 307:2
124:23 216:16	62:24 63:8,16,19	116:13 117:1	294:1 310:1	Mann-Kendall
216:16,21 217:2	84:15 95:24	138:6 146:23	lowers 309:24	226:23 228:8,14
272:12 281:1,5,6	99:12 106:23	151:5 152:19	lunch 137:16,20	228:17,18
281:7 292:22	108:20 109:3,10	153:2,3 155:23	139:21 140:9	230:14 231:15
295:21 296:7,8	113:11 136:19	158:7 159:8	lunchtime 85:20	232:13,19 233:8
300:15	147:4,18 152:3	165:24 167:22		233:10,24 235:1
location 42:21	156:16 158:2	169:22 171:22	M	236:21
47:3 56:12	169:22 170:19	172:16 180:22	M 12:5 74:8	manner 321:2
153:4 196:11	198:12 200:13	205:4,16 211:21	142:16 163:22	Mans-Johnsville
231:16,23,24	205:9,21 214:19	213:20,22 215:2	163:22 164:1	51:21
284:24 285:9	218:1 222:11	219:19,21 227:7	magnifying 90:13	map 18:8,8,9,14
288:18 321:7	223:14 235:7	227:23 232:22	92:21 94:4	49:17 51:9,12,13

52:7,8,10,11,12 64:16,17,18 65:10 105:20 106:2,7 123:19 123:19 146:19 273:6 277:10 278:1,4,6 284:13 284:16 300:2 301:3,9 302:18 maps 18:7 21:6 49:13 March 227:1 295:12 Marine 52:4 mark 85:19 91:3 105:23 106:13 166:15 marked 4:12 26:20,23 40:9,15 41:13,18 59:17 59:22 79:4 82:3 85:14 86:11,13 90:5,10 106:11 108:12 129:2,5 159:13,16 166:12,16,16,20 189:1 203:11,16 246:18 251:1 257:21 258:2,19 294:22 marker 85:7 104:7,21 159:18 market 188:10 marks 161:23 markup 160:11 marshy 54:14 Maryland 245:18 mass 63:5,22 239:7 244:6,7 256:7 material 15:23 20:2 23:6 32:13 61:18 87:21 144:13 148:14 148:18 151:4,5	177:21 195:14 196:12,16 199:15 239:7 243:24 244:12 244:13 271:24 275:12,17 286:12 288:15 289:5 307:24 309:14 316:9,11 319:1,7 320:9 materialized 122:2 materials 25:15 62:5 65:6 148:7 149:19 157:4 177:13,15,16 178:3 183:13 193:12 195:1 245:4,6 250:18 262:15 272:1 274:5 283:4 286:3 289:12,16 290:17,18 307:11,20 308:16,18 311:9 314:15 317:12 320:17 321:6 math 45:18 123:14 235:19 matrix 177:23 matter 7:3 142:13 165:9,16 183:24 184:8 185:4 187:14 188:17 190:6 191:14,22 195:19 209:20 259:17 262:6 302:10 319:11 322:4,13 matters 6:24 Maxwell 4:8 163:12 164:5,8,9 165:18 166:2 179:23 180:4,7 180:14,24 181:9	182:3,23 183:4,7 184:1,5,9,12,16 184:21 185:13 186:8,10,13,21 187:17,20 188:14,16 202:5 202:19,23 222:15,20 224:4 224:20 225:3,16 225:20 226:4,16 226:17,22 228:15 229:4,18 230:3,9,21 231:1 231:17,20 232:11,20 233:1 233:6,12 234:1 234:14,17 235:6 235:13,20 236:15,22 237:2 237:9,14 238:1,6 238:17 253:10 267:24 271:3,9 271:17,19 272:6 273:8 274:3,17 275:1,4,8 276:4 277:11,19,22 278:7,10,21 279:3,11,17 280:2,6,12 281:1 281:12,22 282:4 282:16,23 283:16 284:11 284:14,20 285:17,23 286:11,23 287:8 288:3 289:3,22 290:7,16,23 292:2,7,13,19,23 293:8,22 294:8 295:4,5,11,15,19 295:24 296:1,5 296:13,19 297:5 297:20 298:1,5,8 298:24 299:11 299:16,19 300:1	300:12,20 301:5 301:13,23 302:6 302:11,16 303:1 303:8,21 304:6 304:17,20,23 305:5,18 306:5 306:10,23 307:15,18 308:9 309:3 310:19,22 311:4,6,11,20 312:3,16 313:14 315:13 316:1 317:3,5,10,17 318:2,19,23 319:3,15,23 320:5,23 Mayor 138:8 mean 8:4 20:11 23:2 36:22,23 37:10,15 47:1,15 56:4 62:17 63:8 83:11 120:9 132:15 139:6 140:9,18 143:23 148:3,13 150:23 154:23 161:19 171:20 221:23 224:3 244:1 246:4 249:17 250:11 288:2 321:4 meaning 320:7 means 46:2 227:23 244:2 267:5 315:24 320:19 322:4 measure 169:17 270:11,14 measured 157:23 157:24 measurement 45:4 measurements 158:11,14 measures 127:13	169:16 257:8 mechanical 322:4 mechanism 203:7 267:6 mechanisms 231:6,7 241:8 242:9 250:14 285:4 295:20 296:6 media 170:15 median 305:6 meet 66:16 207:18 249:17 250:5 285:18 289:6,13 meeting 72:12,13 72:22 127:6,9,16 127:19 128:1 130:11,14,17 131:11,12,13 132:8,23 133:8,9 149:16 195:11 mention 221:17 286:19 303:9 308:5 mentioned 14:6 15:14 17:13 29:1 32:18 58:17 69:9 70:10 72:4 145:8 169:15 174:2 183:9 184:22 187:13 192:2 193:11 194:5,7,10 199:5 203:1 210:11 211:2 229:1,13 230:18 233:15 241:2,4 242:15 244:8 257:1 262:4 273:24 282:19 285:12 291:15,23 293:18 294:4 298:13 308:12 311:12 315:8
---	---	--	--	---

317:13 mentioning 199:9 mess 141:8 met 149:14 176:9 184:8 248:16 250:3 metal 32:18 33:19 34:8 116:9 metals 18:19 23:16 24:22 29:1 30:18 32:22 33:13 35:1 53:9,17,19 53:22 65:21 66:9 70:17 279:6 281:16 293:15 method 79:17 145:12 147:10 147:13 244:3 254:4 methods 145:18 254:11 mic 180:13 317:3 Michael 4:8 164:5 Michigan 56:14 259:5 mid-90s 186:1,5 middle 11:12 51:2 115:9,18 140:22 141:11,18,20 237:5 Midwest 1:11 6:20 24:4 28:2 28:15,18 37:20 38:24 40:16 41:12,15 42:11 48:21 50:11 53:13 55:6,9,10 56:16 58:22 60:12 64:1 68:10,13,18 75:18 83:6 85:16 126:15 135:20 136:12	136:16 137:3,9 139:21 150:9 165:15 168:8 182:21 189:22 190:5 196:1 200:14 204:10 207:22 208:24 210:12 211:5,8 211:20 248:12 251:12 252:8,11 252:21 254:24 257:19 260:20 264:15 272:8 273:10,16,20 281:20,23 287:13 297:6,18 298:16 299:5 306:12 Midwest's 134:17 migrates 244:19 migration 196:13 248:9 270:24 283:7 295:20 296:6 Mike 165:20 166:2,5 216:7 mill 245:18 milligrams 291:22 mind 201:13,14 mine 44:24 48:1 167:20 mineralogy 309:6 minerals 309:10 309:16,23,24 310:6 311:23 Mines 41:10 44:11,22 46:7 157:21 minimal 304:7 minimize 318:4,9 318:11 minimizing 318:14 minimum 70:23 187:8,9 188:2	minus 45:10 minute 82:5 88:5 119:22 137:15 166:15 170:8 208:23 210:11 minutes 73:10,12 73:21 89:10,12 89:13,15,18,22 89:23 90:1,2 91:8,12 93:23,24 96:10,11 98:17 98:18 100:17,18 101:1 135:1 139:2,14,15 141:7 142:5,7,9 242:17 244:6 258:9 262:9 264:20 310:23 mirrored 185:22 misapplied 265:16 mischaracteriza... 236:4 mischaracterized 236:18 Mischaracterizes 128:6 misinterpreted 265:16 266:15 misread 10:2 missing 100:22 175:13 misspoke 19:7 mitigating 212:22 mixed 13:7 151:23 316:12,13 317:12 mixture 316:14 317:9 318:6 MNA 202:21,22 202:23 242:8,15 242:18,21,24 243:1,8,11,11,14 244:2 245:11 246:14 247:19	248:5,16,24 249:10,18 250:1 250:5,10,15,24 mobile 62:10 mobilize 62:6 mobilizes 310:1,7 mobilizing 245:1 model 214:24 modeling 43:14 44:13,17 130:6,8 168:18 models 221:1 modification 242:14 modifications 241:12 modify 9:23 MOHAWK 2:3 moment 105:2 179:24 202:6 223:7 moments 215:10 monitor 185:8 200:23 243:6 253:21 254:6 monitored 202:17 215:5 219:14 242:5 246:24 251:9 monitoring 27:5 29:16,17 30:7 33:2,3,22 66:4,7 66:9,16,20 68:15 69:1,2,3 70:16 72:3 124:7,20,23 125:3,9 146:12 146:21 147:1,1,2 147:20 184:17 185:6,11,16,21 185:24 186:6,17 186:18,22,22 187:15,19,22 188:3,12 200:22 202:12 203:2 209:14 212:1	214:12 219:17 219:22 222:23 223:19 224:5,6,9 224:10 227:2 233:7 241:4 242:7 246:2 253:5,9,22 276:21 277:1,4,6 277:13 280:15 280:21 281:7,13 281:13 283:8 284:21 291:7,8 292:16 295:22 296:8 298:10,19 300:6 301:17 303:9 305:7 308:14 309:19 311:21 312:14 312:17,19,21 313:3,6 monofill 151:10 month 123:12 278:13 monthly 123:10 123:10 months 123:12 morning 6:2 9:3 11:14 12:8,9 126:11 138:16 158:21 161:15 286:6,15 294:10 307:10,14 313:19 315:8,9 321:20 motion 7:12,12 86:6,14 mounding 270:7 move 9:6 10:1 14:12 18:1 28:2 64:12 85:21 103:9 104:12 106:22 119:11 132:11 159:19 188:15 217:17 225:8 257:10
---	--	---	--	--

261:7	154:15	25:17 225:14	neutral 61:16	191:1,4,10,15,19
moved 205:4	MWG13-15_12...	238:23 267:19	286:23 287:4	191:23 192:4,9
213:19 214:17	41:14	268:5,5,6 282:14	never 48:16 54:11	192:18 193:1,2,9
256:20	MWG13-15_12...	290:20 320:15	122:1,16,17	193:11 194:4,7
moves 48:21 64:1	40:17	navigation 121:1	139:17 176:13	194:19,23 195:4
moving 55:2	MWG13-15_19...	navigational	new 22:19 34:12	195:16 196:6,18
128:24 186:24	150:11	121:15	85:14 90:9	197:1,4,13,21
255:7 276:10	MWG13-15_19...	near 311:18	159:3,16 177:5	198:2,10,20
321:10	149:11	320:10	187:3 194:8	199:1,4,11,20
multiple 224:9,10	MWG13-15_34...	nearest 40:21	195:17,17,18	200:9 201:1,6,12
224:11 250:19	36:1	44:14,16	207:17 242:11	202:16,20
312:20	MWG13-15_34...	necessarily 112:11	newly 193:24	203:13 204:3
MW-09 146:22	36:7	112:14,15	NFR 273:2	207:1,19 208:15
305:11 306:14	MWG13-15_48...	117:11 135:20	NGVD 37:4	210:11,21 211:2
307:21 309:1	27:3	155:18 168:11	nice 277:24	211:17 212:6,9
MW-1 301:9,17	MWG13-15_81...	170:2 176:4	nickel 310:4	212:21 213:10
302:21,23 303:3	59:19	220:22 237:15	Nijman 3:2,3 4:9	215:9,13,22
303:15,17		265:24 269:19	6:17,19 138:18	216:5,12,19
314:22	N	necessary 149:19	139:7,22 140:11	217:8 218:9,13
MW-10 292:7	N 4:1 12:2,5,5	196:4 254:22	140:15,21 141:1	220:2,10,14
MW-11 292:7	74:8,8 90:21	256:4	142:4,10 163:15	221:9,14,22
305:11,17,19	142:16,16	need 9:5 36:6	163:16 164:2,13	222:6,15 223:21
306:1	163:20 164:1,1	63:20 82:5	165:4,8,17 166:8	224:17,24
MW-2 301:10	N41 89:3 93:22	140:8 142:9	166:11,23 167:2	225:13,17 226:1
302:21,23 303:4	96:9 98:16	220:14 245:7	167:6,12 168:7	226:12,19 228:6
MW-3 280:21	100:16	250:10 267:19	168:16 169:15	228:12 229:1,13
281:1,4,6,8	name 6:2 10:21	268:1,5,5,6	170:8,14,23	229:24 230:5,18
284:22 285:7,8	123:21 191:2	274:6 317:20	171:3,10,15,18	230:22 231:13
285:13,14	226:22 287:3	needed 43:18	172:6 173:1,7,13	231:19 232:5,8
MW-5 280:21	named 191:16	125:18 126:2	173:23 174:2,9	232:14,22 233:2
281:5	Nancy 82:4	158:21 185:4	174:23 175:2,5,9	233:9,19 234:10
MW-8 292:7	National 37:4	195:8 217:14	175:15,18,21	234:15 235:3,7
MW-9 306:4	40:5 41:9	222:13 238:19	176:2,9,13,16	235:18 236:6,13
307:19 308:2,6	native 309:7	255:9	177:7,18 178:1,7	236:20,24 237:4
311:18 312:1,2	natural 36:11	needs 39:3 239:16	178:12 179:1,4,9	237:10,23 238:3
MWG 260:13	61:18 197:18	254:9 264:7,18	179:23 180:5,15	238:9 240:16
MWG13-15-10...	202:17,18 231:5	neighborhoods	180:17,21 181:6	241:1 242:15
153:7	242:5 246:24	264:3	181:24 182:20	243:14,18 244:5
MWG13-15_10...	248:7 250:15	neither 122:20	183:2,5,22 184:2	245:10 246:8,12
153:17	251:9 260:14,24	141:5	184:7,10,13,20	246:16,21 247:4
MWG13-15_10...	261:3 273:23	network 1:6 6:15	185:10 186:16	247:8,16,22
153:15	308:17	188:1,1 206:21	187:13,18	248:12,18 249:1
MWG13-15_10...	naturally 310:2	246:3 277:6	188:11,15,23	249:10,13,16
154:10,15	310:14	networks 209:14	189:6,10,20	250:9,23 251:4
MWG13-15_10...	nature 17:9 25:15	neut- 308:17	190:2,7,17,22	251:12,15 252:2

252:7 253:3	307:16 308:4,23	303:10,15	O 12:5 74:8,8	obvious 229:6
254:2,14,23	310:10,20 311:2	313:10,13,20	142:16 163:20	obviously 13:13
255:17 256:23	311:5,10,16,24	319:2,13,14	163:20 164:1	22:4 84:4
257:3,20 258:4,7	312:11 313:9	northerly 19:16	o'clock 1:18	161:22 165:22
258:12,17	315:7,22 317:1,6	northwest 14:20	oath 142:15	270:22
259:13,14 260:1	317:13,24	120:1,5,16 121:6	object 17:8 38:12	occasion 302:19
260:7,23 261:7	318:16,20,24	121:18,22 177:2	38:17 41:21	occasions 37:22
261:18 262:4,8	319:10,17 320:3	281:6,7 284:23	103:12 104:13	occur 217:15
262:16 263:6,11	320:21 321:9,16	285:2 286:4	130:23 259:8	242:6 243:3,19
263:18 264:13	nine 26:11 27:16	288:1 292:8	objected 131:4	254:9
264:17,24 265:2	Nishioka 3:5 6:19	294:11	objection 7:14	occurred 201:19
265:18 266:8,12	NLET 286:20	Nos 49:9	11:5 28:5,9 31:4	213:23 214:1
266:18 267:9,14	288:12,19,22	note 111:6 139:16	39:2 45:14	255:22 279:19
268:11 269:3,10	289:6,13 290:13	184:2 223:21	46:10,16 48:2	283:7 305:21
269:21 270:13	NOAA 40:5 41:9	268:13 273:21	49:2,6 64:4	occurring 224:5
270:21 271:6,11	41:23 43:7,24	noted 134:17	91:21 97:15	277:4,6 310:14
272:3 273:5,21	158:14	160:23 261:12	103:23 119:14	313:3,20
274:11,18 275:2	non-detect 234:8	276:9 280:9	119:17 128:5	occurs 161:24
275:6 276:1	236:1,3	300:18	131:1,5 132:14	243:2
277:8,17,20	non-filtered 192:6	notes 10:3,4	134:18 151:11	off-property
278:3,8,19,24	192:15,20 193:4	notice 184:5	155:3 160:20	255:16
279:8,14,24	non-parametric	November 18:11	188:20 192:22	offer 138:14 223:8
280:3,9,23 281:9	227:5	18:13 51:14	228:9 232:7	225:21
281:19 282:2,13	normal 22:23	64:20 158:8	236:9 249:19	offering 108:6
282:18 283:13	256:13	276:9	261:10,12,13	offers 227:22
284:8,12,17	normally 62:18	number 4:12 10:8	263:14,17	offgradient
285:11,20 286:5	256:12 257:6	10:15,16,17,18	objections 132:16	255:15
286:19 287:5,23	north 13:21 15:15	85:16 91:10,13	134:17	office 181:4
288:24 289:19	18:23 51:21	171:8 176:20	objectives 173:12	officer 1:15 6:1,3
290:5,14,21	65:8 66:14,18	177:4 189:16	208:2 316:6	6:16,21 7:10,18
291:23 292:5,10	69:14 71:1 85:4	197:17 221:3	obligation 200:21	8:7,10,15,19,24
292:15,21 293:4	153:2,5 154:6	222:23 242:22	obligations	9:10,13,16 10:20
293:18 294:4,19	272:15,17 281:2	247:10 250:3	194:12 195:12	11:3,6,10,17
295:9,13,16	281:2,3,6 289:9	257:11 263:2	observation	17:10 28:1,3,6
296:4,10,16	291:9 292:8	264:8 280:15	117:15 314:7	31:6 38:11,14,20
297:4,16,22	294:11,18	291:2 293:24	observations	38:23 39:6
298:2,6,13 299:9	295:21 296:7	numbering 216:3	150:10	41:20 42:4,7
299:12,18,22	298:21	numbers 9:24	observe 151:9	45:15,21 46:13
300:9,18 301:2	north/south 36:14	10:1,3 11:2	196:23	46:20 48:3,21,23
301:11,21 302:3	northeast 12:11	109:15,17 110:3	observed 35:18	49:4 63:24 64:2
302:7,12,22	12:16 83:19	181:20 204:6	54:9 67:15 68:5	64:5 73:9,11,15
303:5,18 304:4	110:11,16	numerical 43:13	314:5	73:20,24 81:22
304:12,18,21,24	118:11 278:5,9	NW 2:10	obstructions	85:13,24 86:7,12
305:15 306:2,6	301:3,8,8,19		307:22	86:16 91:22
306:21 307:12	302:14,20 303:6		obtained 53:13	92:5 94:24 95:4
		O		

95:7 103:11,18 103:22 104:1,6,9 104:15 109:23 119:13,15 128:8 128:11 130:22 131:7,15 132:13 133:4,13 134:4 134:15,24 135:4 135:8 137:14,18 138:3,10,19 139:5,13,18 140:2,13,17,24 141:4,19,22 142:2,6,11 151:12 155:5 158:16,22 159:1 159:21 160:7,16 160:22 161:6 162:5,17,21,24 163:4,14,17 186:7,11 188:18 188:21 192:24 228:10 236:11 249:20 259:12 259:20 261:9,11 263:15,21 264:19,23 295:23 296:2 317:2 321:10,12 321:18 offices 188:5 offsite 78:13 148:8 206:22 214:9 240:6 252:22 262:14 304:9 oftentimes 168:20 168:24 170:20 172:3 185:1 oh 16:11 45:21 76:16 115:13 132:1 159:10,22 180:14 191:9 220:18 268:13 okay 7:10 8:14,18 9:13,15 14:19	18:6,14 21:15 27:12 35:21 36:3,21 40:14 41:6 44:7 47:10 47:22 49:4,15 50:16 52:18 66:11 73:20 74:10,14 75:2 79:13 80:14 81:17 82:9,24 86:7,12,15 87:2 87:10 92:12 93:12 94:21,23 95:4 96:2,15 97:22 98:3,6 102:11 104:1,15 104:24 105:5,17 106:15,20 107:3 109:14,23 110:10 114:19 115:22 116:1 117:4 118:1 119:1 121:3 123:14 125:14 128:24,24 132:11 134:6 135:4 136:14,18 136:22 137:12 138:10 140:2 142:1,20,22 147:4,18 149:6 149:13 151:24 152:1,4,5,7 157:15 158:22 159:1,11,21,22 160:7 162:5 188:15 191:23 208:15 226:19 231:19 261:11 271:11 277:8 287:8 298:1 304:20 313:9 321:16,18 old 51:20,22 52:1 52:3,5 181:7	older 167:22 oldest 158:6 once 7:9 20:12 22:14 32:23 34:13,13 140:12 213:18 238:17 254:15 301:22 310:5 ones 34:2 69:19 156:12 177:5 250:4 ongoing 193:16 195:9 198:7 200:21 209:6 212:20 214:12 253:9,21 312:13 312:17 313:6 online 22:17 43:22 open 18:2 198:21 opened 131:17 operated 204:9,9 operating 16:5,9 16:15,24 17:2 30:14,16,19,22 31:9,24 32:8,19 33:19 34:9 57:15,17,19,22 58:8,13 69:5,8,9 69:13,17,24 70:11 71:14 239:1 272:7 282:20,22,24 operational 51:24 operationally 320:7 operations 107:9 181:1 217:6 310:15 operative 199:18 operator 100:21 opine 226:9 opined 256:3 opinion 37:18 86:5 165:11,12	176:5 199:8,8,11 199:12,16 205:2 212:21,23 216:20 221:18 224:17 226:1,4 249:18 264:11 265:16 295:6 296:10,12,14,17 296:20,21,23 297:1,3,5,6,17 297:19 304:5,13 304:14,19 305:3 311:3,16,24 312:5,5 315:12 315:23 opinions 108:7 175:2 197:2 198:4 289:21 296:20 297:15 303:7 308:8 opportunity 175:6 181:19 183:23 196:22 225:10 231:4 283:7 285:3 302:8 319:12 opposed 147:16 opposite 272:19 316:18,19 320:17 321:7 opted 188:7 option 134:9 256:8 257:14 260:11,13,21 262:13,18 264:10 270:18 320:16 options 134:13 170:5 order 7:16 9:1 45:11 66:15 152:11,14 188:8 197:5 200:24 203:3 223:4 267:20 270:6	273:17,18 275:21 280:1,7 286:17 288:14 289:5 290:2 300:7 306:17 315:20 317:21 orders 209:7,24 organics 53:2 organization 223:2 organize 222:20 original 9:1 161:20 215:21 280:13 289:9 296:24 originally 275:16 Outboard 52:4 outcome 229:20 322:13 outcomes 172:13 227:9,15 outfall 26:17 outgrowth 168:21 outlier 306:15 outline 190:10 213:19 216:9 outlined 190:13 211:7 315:19 outlines 178:20 outlining 247:19 outside 13:9 83:21 87:6 240:10 262:15 266:17 297:11 305:23 overall 174:15 198:6 213:11 218:8 227:24 234:4 237:22 282:11 306:15 overgrown 114:23 117:13,15 118:16 overkill 60:20 overlap 186:3 200:16
--	---	--	---	--

overruled 39:10 48:4 49:7 92:6 131:18 259:24 263:22 oversee 223:1 oversight 169:10 169:12 overview 203:21 204:13 owned 135:20 137:2,9 owner 178:21 281:24 oxidation 310:6 311:22 oxidizes 309:23 oxygen 309:18,19 309:21	161:13,13,15,16 161:19,22 166:24 167:7 189:20 191:5 198:12 204:4,5,5 204:5,7 213:16 215:23 216:3 221:9,16 223:24 226:12 232:15 232:18,23 233:19 235:8,10 235:11 237:4,6 240:24 247:9,11 251:5,6 258:18 258:20 260:8 268:11 269:5 271:12 274:22 295:17 297:23 297:24 304:13 304:16 305:1,2 306:8 308:24 310:10 322:6 pages 10:19 16:11 17:16 32:5 35:9 35:9,11 58:10 59:12 70:3 71:17 72:21 73:2 111:3 112:23 114:12 114:14 117:5 136:21 158:3 191:6,6 240:17 265:4 274:19 pan 62:14 panel 163:6 164:5 paragraph 37:19 87:5 149:14 198:13 221:15 232:18 235:8 247:13,16 248:20 258:19 260:8,10 265:19 269:6 296:16 304:15 305:2,3 305:16 306:3	310:12 parameters 24:22 25:9 26:12 29:19 52:24 61:1,23 65:19 219:16 parenthesis 198:20 199:2 parking 81:9 part 9:24 32:23 43:11 52:22 55:4,15,23 107:17 109:2 110:20 111:7 113:16 119:6 125:20,23 130:1 133:18,20 140:14 151:19 156:20 160:1 177:8,13 178:12 188:6 190:14 191:13,21 200:20 202:24 206:16 212:20 218:7 219:2 222:8,18 225:2,8 239:18 242:20 256:19 273:11 275:18 277:16 282:5,10 283:9,9 287:15,21 291:19 293:19 294:2 301:19 302:5,9 306:22 308:15 309:17 312:16 315:13 315:14 particular 36:14 40:3 45:5 52:11 55:19 60:5 61:10 62:8 90:1 116:4 118:21 143:8 152:16 153:20 167:17 184:23 185:3,7,9	187:5,14 188:6 219:1 225:6 237:14 242:2 248:19 256:3 276:13 280:20 285:1 301:17 306:20 309:11 particularly 280:21 291:17 307:24 parties 6:10 163:8 322:10,12 parts 39:23 171:4 318:8 passed 283:10 passing 90:8 path 321:3 pathway 196:13 217:10,16 218:3 270:24 pathways 172:18 172:19 Patrick 146:8 147:19 291:1,24 300:3 302:19 314:19 pattern 62:15 patterns 230:12 pause 308:22 PCB 1:10 6:5 207:7 peculating 23:8 pencil 45:20 pending 194:15 194:19 195:16 195:17 210:3 276:14 penetrate 270:23 people 81:9,11 82:17 121:9 138:2,6,8 Peoria 40:6,20 41:3 46:6 47:24 157:20 percent 303:20,22	percentile 305:8 305:10,14,20 perched 20:18 percolate 19:5 20:20 percolates 20:23 Perfect 226:19 perform 187:22 190:20 194:24 223:4 236:20 performed 190:23 224:7 233:8 234:24 249:6 277:14 278:14 279:22 280:8 282:1 289:4,24 291:1,5 306:11 306:17 313:23 perimeter 170:21 period 22:11 47:3 47:21,23 215:4 245:5 periods 243:4 permanent 266:20 267:5 permeable 23:6 permit 16:2,5,9 16:16,17,21 17:1 17:14,15,21 30:10,12,12,14 30:17,20,20,22 31:9,23,24 32:8 32:15,19 33:19 34:5,9,17,21 35:4,7 43:12,14 53:13,16,21 57:13,15,16,18 57:19,22 58:5,9 58:13,18,19 59:1 59:10 69:7,8,10 69:13,17,24 70:11 71:3,6,13 71:14 72:5,9,17 73:6 126:8 193:23
--	---	--	---	---

permits 69:4,5 210:17	214:3	239:22 241:24	111:1 113:9	53:12 54:3,6
permitted 183:17 183:19 289:17	pick 246:1	242:9 243:7,8	117:4 124:6	57:21,21 58:18
perpendicular 301:15	picking 144:13	277:1,21 285:6	135:17 136:19	58:21,21 60:9,11
person 259:23	picture 110:19	293:2 312:18	142:19 155:20	62:14 78:1,2
personal 48:12	111:5,12,21	313:7 322:5	157:14 186:8	84:16,16 125:15
personally 107:13 299:13	112:5,10,18,19	placed 22:15,15	295:24 317:3	207:15 229:20
perspective 241:18 277:23	113:24 114:21	50:15 51:1 55:8	pleasure 162:23	269:16,22 270:6
pertains 133:7	114:24 115:2,4	55:17 56:5 82:2	plume 172:3	270:10,12,15,19
petition 297:19,20	116:3,5,9,14	206:7	248:8 249:9	275:10,10,10,13
pH 61:12,12,16,18 61:18,20,20 62:8	117:12,14,18,21	placement 107:21	plumes 248:22	275:13,15,23,24
287:4 308:5,13	118:2 119:10	placing 29:5	plus 29:22 45:10	276:5,5,5,8,8,8
308:17,21	152:19 153:5,10	129:1	268:8	276:10,16 277:5
309:24 310:1,7	153:11,15,20	Plaines 13:19	point 7:20 53:23	277:7 295:21
311:3,7,12	155:13,15,21	14:13 65:4 81:4	77:19,22 85:4	296:7,8 297:10
phase 6:6 81:19 83:5 165:14	167:7	87:22 101:20	90:18 95:24	297:12 298:11
191:14,22	pictures 9:21,23	102:6 107:5,14	111:15,20	298:19,21
220:20 226:8	108:20 109:7,7	107:18,22	118:24 123:10	302:21 310:17
239:14,15	109:10 110:7	110:23 120:20	128:20 148:21	314:22
280:10 281:21	113:1,3,6,12,13	272:18 314:24	149:13,15	ponds 37:21 52:16
283:14 284:7,17	113:16,21	Plaintiffs 175:12	172:10 185:21	56:13,13 57:19
319:24	114:13,15	191:21 295:1	205:7 224:8	57:23 59:10
phased 62:21 63:16	118:21 119:2,4,6	plan 174:5	226:6 230:10	64:19 65:12
phases 169:3 190:5 205:2	119:8 152:8,12	planning 169:5	231:24 235:21	66:1,6,14,18
209:20	152:17,24	plans 127:1	238:16 244:22	67:15,19 69:6,7
photo 10:7,8,9,9 10:11 154:9,13	153:10 154:1,4	193:23	255:8 262:2	69:13,14,16 70:1
271:21	154:18 155:11	plant 13:20 43:17	280:23 282:4	70:12 71:1,15
photographed 110:7	156:2,5,12	44:12 51:24	295:17 300:24	72:5 73:6 77:23
photos 10:24 11:1 12:11,15 108:16	piece 65:3 121:13	54:23 260:13,15	304:19	78:6,9,17,17
108:18,18 109:2	139:14,16	260:22	point-oriented 203:24	124:10,18 127:2
110:10,14,15	pile 15:5 121:19	plating 243:23	pointed 283:18	127:7,13 128:15
117:7	pin 91:15,19 93:4	play 24:19 53:7	pointing 267:8	134:9 210:22
pHs 62:7	93:7 94:11,15	185:8	281:2	215:15 223:14
physical 25:9	95:17,20 96:20	played 34:2	points 42:19	223:20 229:16
	96:24 99:3,7,24	202:15	187:7,9 188:3	233:18 258:23
	101:11,15,19	please 6:11 13:17	223:22 224:14	270:1,2 271:2
	102:5 103:1,4	18:3,8 42:11	232:23 233:4	274:7 275:7,9,20
	pinpoint 245:15	74:14 75:1	253:13	275:22 276:2,5
	pipe 304:3	80:12,21 83:15	pole 116:9,14	276:22,24
	pits 289:8	84:13 88:7	policy 1:5 139:6	287:15 291:9
	place 14:10 56:11	92:17 93:11	Pollution 1:1 6:4	292:8 294:11
	67:22 127:21	94:21 95:24	76:23 191:8	299:7 300:16
	128:1 186:1	96:13 97:10	199:7 276:15	304:8 305:22,23
	199:2 202:12	98:4 102:12	pond 25:3 26:4	312:20
	211:13 229:5	103:7 104:18,21	27:24 52:13,13	pop 117:14
	231:7,7 239:21	105:3 106:15		popular 62:4

population 172:22 172:23 215:8	41:11 49:13 52:19 56:17	prepared 30:14 30:19 34:4	120:10 132:17 170:17 177:12	145:3 148:20 154:5 166:1
portion 243:15 284:23	70:18 122:8 123:1,11,16,20	72:11 146:7 158:23 193:22	177:14 178:5 218:18 300:23	181:19 244:16 249:4 260:12
Portions 129:23	166:5 242:1	193:23,23 203:21 216:5	prevent 243:8	probative 104:4
posed 218:6,21 222:4 244:3	Poz-O-Pac 78:5 275:17	221:11 230:1 265:22 274:20	preventative 287:16	161:1
possibility 76:9	practicability 256:14	295:6,14 296:21	previous 69:19 76:17,18,21 82:3	probes 287:11 288:11 289:8
possible 7:22 62:20 89:17	practicable 170:6 182:14 234:19	preparing 27:7 32:8 33:18	109:11,12 160:4 205:1 213:23	306:24 307:1
possibly 134:16 294:1	260:13 263:5	34:16 35:4,13 59:1,14 67:2,3	262:5 263:8 283:1	problem 8:16
potable 55:21 205:17 219:24	practical 225:4 270:9	71:6 72:16,20 73:5	previously 35:24 204:9 205:24	problems 270:20 270:21
220:7 283:21 300:11,14,15	practice 42:24 164:24 181:1,18	presence 196:23 201:18 251:20	209:1,8 246:17 255:23 298:16	procedures 270:8
potential 205:10 207:9 211:14	234:19,21	300:13 310:8,16	309:20	proceed 6:24 39:9 74:7 86:17
214:10,11 217:9 220:8 227:8,15	practices 206:2 270:9	present 18:21,23 21:24 127:16	primarily 15:22 26:3 164:20	264:24
229:14 245:15 248:9,9 273:15	Prairie 1:5 6:15	179:1 188:9 202:4 203:24	167:22 205:12 205:16 219:15	proceeding 108:1 133:12,19,20
283:4 284:2 285:9 291:13	pre-1966 319:22	209:10 217:15 239:5,7 240:9	306:13 320:11	134:7,14
293:5,8 294:9 297:11 304:11	pre-numbered 85:18	251:22 291:20 309:10 310:2,4	primary 204:20 205:20 262:20	proceedings 1:14 133:2 321:22
306:18,18 318:4	precipitation 22:4	314:1 315:17 316:22 318:16	294:13,14	proceeds 81:3
potentially 121:18 225:11 315:9	preclude 202:3	presentation 203:20 216:3	principal 164:17	process 72:10,14 86:4 121:4,4
pounding 148:11	predating 176:20	226:13 230:15 240:22 299:23	printout 44:6,9 45:2	86:4 121:4,4 153:23 169:9
pounds 143:9	predicated 220:24 266:23	presented 85:15 204:12 221:18	41:24	178:20 182:6,12
power 68:1 260:13,15,22	predominantly 216:22 272:13	236:5 296:14 297:12	printouts 41:22 41:24	182:15,24 184:23 202:13
274:5,10	preferential 196:13 270:24	presenting 138:23 235:16	prior 29:5 65:14 76:18 83:6	202:15,23 213:4 213:11 214:18
PowerPoint 238:10 271:12	preferred 127:23 128:2,7	presently 276:10	128:3 184:7 200:11 226:7,8	225:8 238:12 242:20 243:22
274:23 277:9	prefers 260:14,24	preserved 29:6	239:14 258:14 261:13 272:24	245:19 250:15 251:20 252:13
279:15 299:23	preliminary 285:24 286:16	preset 169:1	279:20 280:5 281:23 319:9	252:19 253:7 255:6,7,7,9
306:7,9 312:12	preparation 129:22	pretty 63:4 92:9 111:16 114:22	proactive 179:13 62:20 92:9	256:11,13 257:7 274:11,12
Powerton 18:2 21:3 23:12,20,21	prepare 16:14 29:9 30:1,2,10	117:13,15 118:15,17	probably 44:2 107:9 111:24	275:19 276:11 289:23,24
24:16 25:1 27:5 28:18,21 29:12	30:13 34:8,11 57:1,13 58:13		116:15 117:2 123:17 129:14	processes 248:7
30:9,13 34:17 35:8,16 40:7	69:10 70:8 71:18 215:13			produced 274:6 producing 274:4 274:10 production

<p>318:14 professional 180:9 180:23 program 24:19 28:21 29:7,11 53:8 54:24 55:6 56:8 169:21 173:16 181:11 181:12,15 182:19 184:17 185:6 187:4 200:3 206:14,15 208:1,2 212:15 219:17 231:18 programs 171:9 186:6 208:3 209:4 212:1 222:24 242:22 257:16 276:21 312:21 project 2:8 6:14 15:2 121:24 122:1 125:23 136:8 157:11 165:19,21 176:21 222:19 273:12,14 318:21 projects 171:11 171:16 227:17 227:18 prompt 137:21 promulgated 181:12 183:21 195:22,24 207:11 221:2 291:5 293:17 proper 182:8 242:8 289:17 292:4 properly 203:7 255:11 properties 167:23 168:1,3,5,22 181:7 198:8</p>	<p>217:4 property 24:5 37:2 55:3,8,10 55:18,22 56:6,9 56:9 65:3 67:5,7 81:1,10 83:6,19 86:23 87:14 92:2 116:12 118:12 136:4,5,7 136:9,11,12,13 136:16 137:2 152:21,24 153:1 159:18 200:1 230:23 231:11 231:15,22 232:1 232:3,4,10,13 246:6,9 272:17 273:12,18 284:6 293:3 proposal 85:15 122:1 194:15 propose 62:20 207:4 proposed 179:16 194:8,20,20 195:18,18 207:8 210:3 240:18 259:3 proposing 257:13 protect 243:9 318:21 protected 252:23 protection 255:15 268:20 287:2 288:13 290:10 protective 182:9 206:21 240:7 provide 30:4,6 105:14 173:24 194:17 203:21 249:24 284:18 315:23 provided 10:19 52:24 83:4 90:10 104:22</p>	<p>148:9 190:12 287:11 296:22 305:6 310:22 provides 45:6 47:8,18 100:13 providing 7:22 proximal 218:20 proximity 259:5 prudent 259:23 public 72:11,13 72:22 127:24 138:1,21 139:7 published 189:19 219:4 pull 63:9 149:3 152:2 157:13 246:17 pulled 43:19 58:6 59:5 69:22 83:3 129:16 135:14 157:11 161:18 pulling 24:1 34:6 71:13 pump 259:2 260:2 260:11,16,21 261:19 262:1 pumped 22:5 pumping 259:6 purchase 83:6 pure 63:11 purely 63:9 purpose 40:1 55:16,17 126:5 149:16 155:17 155:19 167:24 271:17 purposes 22:7 40:16 43:10,19 59:18 63:15 126:3 127:10,15 205:18 pursuant 28:15 56:16 68:10,12 68:13 132:23 193:18 195:1</p>	<p>put 7:16 14:10 33:16 37:17 38:13 56:11 109:13 118:16 118:22 143:6 149:2 151:24 160:14 199:2 203:22 209:16 228:22 232:2 234:19,20 270:18 282:18 293:2 304:14 305:1 315:21 putting 169:6</p> <hr/> <p style="text-align: center;">Q</p> <hr/> <p>qualifications 175:19 176:7 184:4,6,15 qualified 188:22 qualifies 290:8 qualify 188:16 quality 205:22 206:5 219:3,3,7 219:9 220:5 223:23 228:1 229:11,21 281:18 288:20 288:23 289:13 290:12,19 298:18 306:16 quantitative 227:4,6 230:13 quantities 316:14 quantity 223:23 224:16 277:23 278:1 280:19 Quarles 175:7,9 175:11,19 176:10 179:5 184:3,8,11,14 187:6 220:11 225:14 234:11 235:12 236:7,13 236:20 237:6</p>	<p>246:13 250:24 251:1 256:24 265:22 266:9 267:10,15,17 268:13 269:11 269:13 270:3 Quarles' 175:16 179:2 183:23 235:5,8 237:5 265:15,20 269:2 269:4 311:3 quarries 121:10 quarry 65:6 304:2 quarrying 217:6 quarter 123:4,5 quarterly 27:4,17 28:24 29:22 57:4 65:20 69:2 123:3 224:5 276:24 313:3 quarters 123:12 question 24:11 39:13 46:17 67:11 76:13 82:7 86:20 122:4 131:21 176:7 192:23 222:16 225:5 236:10 260:19 263:16,18,20 312:2 320:4 questioned 175:21 questions 17:9 31:5 41:21 42:6 130:16,23 132:7 137:13 142:23 143:1 153:10 162:16 quick 264:18 quicker 20:24 quit 321:14 quite 19:5 20:21 23:8 114:1,3 145:14 164:21 165:21 167:20</p>
--	--	--	---	--

190:10 193:16	258:18 260:7	199:9 215:11	319:1	redevelopment
193:20 200:16	295:9,17,18	220:10,19	recommendation	14:2 167:13,19
215:1,20 239:10	297:2 305:2	221:12 225:13	104:6 259:1	167:21,24 168:4
245:14 275:9	reading 175:15	225:17 230:6,7	297:14 299:1	168:6,13
282:16 283:5	reads 41:7 258:21	234:10,16 238:3	recommended	redo 235:19
314:10	310:12	246:12 256:23	225:14	redoing 207:15
quote 87:19 89:2	ready 18:4 152:5	262:16,19 266:8	record 6:7 10:5	redone 207:16
	163:18 213:2	266:12 267:9	11:7 17:19	refer 30:5 82:18
R	real 206:6	299:4 302:3,12	42:20 46:5	83:15 98:5
R 1:15 12:2,2,5	really 160:24	302:16 303:18	47:22 73:12,14	111:23 126:10
74:8 142:16,16	167:16 181:15	307:14 311:2,6	73:16,21 74:1	165:5 191:4
163:20 164:1	204:16 206:18	317:1,6 319:3,19	75:24 76:13	202:20 213:15
R-E 82:19	224:21 225:22	recalled 37:20	85:22 86:2	213:17 215:22
rain 20:22	252:23 267:6	received 61:19	103:10 109:19	220:15 221:9
raise 11:12 163:9	268:3 270:17	275:20 294:12	109:22,24	223:24 232:15
raised 131:12	316:20	receiving 241:17	119:12 132:12	265:7 271:14
184:14	reason 22:18	275:11	134:18 135:5,9	274:18 296:17
ran 205:24	91:18 93:6	receptor 172:21	135:24 137:15	297:23 304:12
Randolph 1:16	94:14 95:19	172:22 205:19	137:19 140:3	308:23
range 61:12 62:7	96:23 99:6,23	215:8 217:18,20	146:4 150:8	reference 76:9
62:8	101:14 103:3	218:3 221:5	157:20 159:20	87:8 107:10
ranges 37:14	161:16 279:12	receptors 172:4	162:6 163:1,5	198:17 220:21
61:12	306:19	172:18 205:11	164:3 165:24	227:4 256:4
ranking 251:20	reasonable 259:23	205:13 206:8,22	186:15 190:10	268:3,3,18 269:1
rapidly 243:3	reasonableness	211:15 214:9	191:14 198:15	269:14 300:22
RBCA 172:16	256:14 268:23	217:9 220:8	215:3 255:24	302:17 311:7
RCRA 170:1,9	reasonably 234:22	222:3 240:6	256:1 258:13,22	320:1
208:9 212:15	reasons 160:20	252:22 255:15	263:6 264:20,24	referenced 76:8
227:2 247:1	243:5	255:16	267:16,23	77:8,14 127:5,6
252:6 257:8	rebuttal 175:16	recognition 243:1	277:16 301:20	130:12 189:14
281:16	220:15 235:5,9	recognize 29:16	301:24 312:17	189:15,18
re-cross 158:18,19	237:5 266:9	118:2 191:1	315:14 321:19	190:20 198:19
re-direct 137:23	269:4	208:24 258:4	recorded 41:3	199:14 205:2
141:12 142:15	recall 12:13 15:10	282:9	158:14	226:24 267:2,18
re-lined 21:16	21:16,18 54:17	recognized 199:17	recording 40:2	269:23 299:3
re-lining 22:12	80:19 107:4,7	206:2 209:19	47:3,21,23	references 75:21
229:16,20	120:2 121:20	216:10 239:4	rectangular 49:20	100:10 189:4,21
re-re-direct	122:9,14 132:7	recognizes 200:3	red 91:15,19 93:4	191:5 198:18
162:19	135:22 136:1	recognizing	93:7 94:11,15	250:2 265:23
reach 48:1	143:1 149:24	201:18	95:17,20 96:20	266:3
reached 46:7 47:2	153:9 156:22	recollection 16:8	96:24 99:3,7,24	referencing 83:4
47:20	175:15,18	74:20 82:10	101:11,15,19	107:4 131:13
read 10:3 36:5	184:13 190:17	199:13 225:20	103:1,4	161:21 216:1
40:4 76:11 88:3	190:22 191:15	278:19,24 279:3	redeveloped 13:24	256:24
247:14 248:20	192:10,11 193:2	303:21 317:10	14:1 273:3	referred 84:12

86:22 250:24 275:19 278:5 284:9 286:6 301:7 314:9 referring 76:13,15 87:2 120:7 135:12,18 136:18 170:10 170:12 172:23 177:19,22 181:8 194:12,21 266:1 279:10 314:24 refers 82:21 83:17 83:23 88:19 93:16 96:3 98:10 287:24 reflect 11:7 273:7 299:24 306:8 reflection 115:19 115:21 refresh 74:19 82:10 refusal 79:15,23 79:23 80:8 143:10 145:6 regard 286:9 regarding 107:21 248:4 284:18 299:2 regards 72:12 263:19 register 194:16 regs 293:17 regular 14:18 187:22 228:18 313:20,23 320:13 regularly 242:21 regulated 177:4 204:23 208:14 209:3,15 239:9 252:5 254:7,21 255:5 257:15 266:5 regulation 184:24	194:13 229:9 regulations 183:18,19,19,21 185:15,18,22,24 195:13 206:12 207:3 209:23 239:19,21 240:2 241:2,11,12 regulator 182:18 184:19 185:2 187:12 213:4 regulators 228:7 228:13 regulatory 169:13 169:13,21 172:14 178:16 179:15 195:11 196:3 199:23 203:7 204:18,22 206:23 207:21 208:3,16,19 213:19 219:17 231:18 240:11 242:22 275:12 regulatory-driven 169:2 rejected 175:3 184:18 relate 202:22 229:2 241:6 290:15 317:24 related 23:11 24:16 26:6 65:23 66:12 68:11 133:2,20 208:2 209:11,23 254:20 257:12 262:22 267:22 276:22 277:5 279:10 295:6,20 296:6 299:7,7 309:14 311:22 319:8 322:9,11 relates 182:24 267:23 283:17	290:12 307:24 314:18 318:13 relating 263:12 relation 122:12 148:11 relative 36:23 37:3,10 217:21 219:23 relatively 194:16 217:3 243:3 release 254:4,15 255:2 releases 171:23 relevance 132:14 282:14 289:20 relevant 132:21 133:1,11,24 134:16 200:4 206:23 211:6 219:6 240:12 249:5 252:23 271:22 272:4 277:21 280:11 284:18,21 300:19 301:12 303:7 304:4 308:7 relied 189:11 relief 165:13 204:15 206:24 267:22 rely 228:7 259:14 259:23 remain 78:8 211:12 remained 199:18 remaining 235:11 remains 290:6,8 remedial 169:4,5 169:15,16 171:16 200:2 206:10 238:12 240:15 242:20 242:24 255:18 257:8 260:21	316:6 remediate 284:6 remediation 54:24 55:5 168:17 169:3,11 173:8 174:3,5,10 175:24 178:13 181:11,22,23 188:17 201:20 201:21 208:1 273:19 remediations 175:22 178:8 remedies 169:18 183:3 248:24 255:19 259:18 264:15 remedy 133:12,21 134:10,14 165:13 172:21 178:18 182:2,5,8 183:1 195:6 201:2,4,11 202:10 203:8 204:15 206:24 207:4 212:20 224:19,19,21,23 225:1,2,9,10 226:2,6,9 228:3 228:4 229:5,14 229:17 240:19 241:6 245:8 248:5 253:6,20 254:17 255:1,5 256:3 260:2 261:20 262:10 262:10,12 267:21,22 268:21 272:2 273:11 274:12 292:4 315:20 remedying 256:1 remember 26:17 110:22 111:7,22 128:22 192:6	216:17 275:10 321:21 remind 42:15 60:11 remnants 116:18 removal 256:8 262:13,17 263:24 264:4 289:20 remove 267:6 removed 77:18,19 78:4 244:1 267:7 276:9 removing 276:18 rep 140:19,22 141:10,17 rep's 141:3 repair 150:8 repaired 13:11 116:20,22 repairing 314:4 repairs 116:15,17 118:16,19 149:20,22 150:6 rephrase 31:7 45:16 46:21 128:10 136:24 151:13 192:24 236:12 replace 11:1 104:23 report 13:7 27:5 30:8 146:7 149:8 166:15 175:16 189:3,8 189:15,19,23 190:8,9 193:13 198:11,12 199:5 199:15 203:22 213:16 215:21 220:15 221:10 221:15 224:1 232:15 233:20 235:5,9 236:5,23 237:5 240:17,23
--	---	---	--	--

253:12 258:23	121:24 131:8	240:6 242:3,13	288:17 291:14	101:1 110:2
262:6 263:7	138:13 211:21	245:8 250:1	307:10 309:22	111:17,22 115:9
265:4,15,20,22	291:6	265:14 269:15	310:8 311:17,18	115:16,23 116:7
266:9,24 267:2	requested 9:22	269:24	retained 175:11	118:4 121:5,15
267:18 268:12	50:11 51:3 55:6	respective 164:14	191:21	132:11 135:9
268:18 269:2,5,5	62:19 252:20	respond 134:3	retardation	137:19 142:12
269:15 271:13	requesting 138:15	174:18	250:16	145:11 146:1,19
274:19 277:18	require 200:10	responded 266:9	retention 26:4	147:5,9 149:1
278:12 282:6,7	234:11 254:19	267:10	reuse 286:13	151:13 155:10
296:11,12 300:3	required 16:20	Respondent 3:13	288:8 290:9	156:23 160:17
308:24 310:11	29:21,23 30:8	7:5	review 21:23 82:6	161:7 162:22
319:20	57:5 58:4 69:1	Respondent's	165:23 169:9	163:5,10 181:15
reported 1:21	70:23 210:17	4:13 5:1,7,16	175:6 183:23	184:20 188:14
234:9 322:3	211:8 263:3	26:22 28:10	190:8,12 194:24	189:4 229:12
REPORTER	287:1	40:8 41:17 49:8	203:16 207:2	230:20 232:6
150:18 180:12	requirement	59:21 64:8	217:10 230:3	234:20 258:15
180:16,20	24:20 57:11	166:19 203:10	240:18 292:5	271:21 278:6
reporting 57:3,11	78:20 212:16	258:1 261:15	301:22 302:4,8,8	280:6 281:12
60:2 68:16 69:1	250:7 284:5	responding 66:22	reviewed 21:12	284:14 288:3
169:13 234:9	requirements	response 39:4	75:4,8,14,18	291:8 292:24
reports 21:2,6	23:21 33:1,4	53:10 133:14	210:14 228:20	297:19 301:2
29:9,24 30:5	53:10,16,20 57:3	237:12 251:23	230:1 237:24	308:22
57:1,6,8 175:6	66:16,19,23	260:19 290:1	262:5 277:15	right-hand 92:13
183:23 210:18	192:13 193:19	296:22,24	292:3 315:14	93:1 94:18 97:4
230:1,5,8	195:9 200:8	297:13 306:12	319:20	99:13,20 102:1
represent 63:22	204:22,22 209:6	rest 56:10 87:18	reviewing 191:15	102:13 106:12
91:19 93:8	239:24 252:17	308:14	272:1	115:7,8,11 204:6
94:15 95:21	253:6 257:18	restoration	revised 199:8,8	rigorous 251:24
97:1 99:8 100:1	277:2 287:1	260:12	revisit 23:12	257:14
101:16 103:4	requires 29:18	restoring 256:17	Rich 155:20	ripped 120:23
285:22 316:23	228:19 229:9	restricts 55:19,20	156:10	157:3
representation	resampling 123:9	result 23:5,9	RICHARD 4:3	rising 37:22
230:12	residential 65:9	103:16 209:14	rig 143:9,22	122:12
representative	217:2	227:9 234:6	right 6:2 9:9	risk 172:7,22
63:4,7,11,21	residual 183:16	236:3 252:16	11:11,13 12:17	173:21 190:23
138:13 223:17	residues 176:22	259:6 284:1	13:14 14:23	206:19 211:13
283:3	resistance 321:3	285:7 288:19,21	15:15 16:6 17:3	214:23,24
representing 2:13	resolved 185:5,5	310:6 311:19	18:1 24:14	217:12,13,15,22
3:13 6:15 285:7	187:12	316:15	34:13 44:1,21	217:23 218:1,6,8
285:8 322:11	resources 36:11	results 61:2	45:12 46:12	218:16 219:12
represents 100:24	248:11	103:17 192:6	47:16 51:5	220:12,17,23,24
repurposing	respect 165:12,13	193:5 214:12	55:18 72:6 74:1	221:3,7,11,17
276:16	168:1,22 175:24	233:21 238:4	79:24 83:10	222:3,4,7 237:17
reputable 282:8	192:13 194:2	279:4 285:13,15	84:19,24 91:13	241:9 243:12
request 23:17	207:6,14 215:6	285:18 288:16	93:9 97:22	251:21 252:8,10

<p>252:15 253:24 290:15,18 risk-based 55:4 169:1 172:11,15 173:5,8 205:8 206:6 240:4 253:1 256:20 risks 214:21 218:21 238:19 248:10 251:21 252:1,21 255:10 257:16 river 13:19 14:13 14:17 37:24 38:9 39:16,20,20 39:22,24 40:2,5 40:7,20 41:9,11 42:14,16,18,20 42:21,22 43:7,16 43:16 44:10,12 44:14,15,18,22 46:7 47:20 48:1 49:17,20 50:21 65:4,7 68:3 81:5 87:22 101:20 102:6 107:5,14 107:18,22 110:24 111:14 111:18 114:4,7,9 115:3,6,9,15,19 120:20 152:20 157:6,20,23,24 272:18,19 278:16,18,22 303:24 314:7,24 315:3,6 318:11 319:7,9 320:10 320:18 321:8 rivers 1:6 6:15 42:19 259:5 road 2:3 13:21 14:6 15:13,14,18 15:19,20 76:9,20 76:20 77:4,15 78:19 81:8</p>	<p>84:21,22,23 85:5 264:6 272:22 292:17 294:12 294:14,17 298:12,20 299:20 roads 15:17,18 121:9 263:2 299:15,21 robust 62:16 227:23 rock 157:3,10 role 31:12,13 33:16,18 34:1 35:3 57:24 58:24 69:11,18 71:5 72:16 164:14 165:4,8 180:23 319:10 roles 141:1 roll 264:2 Room 1:16 ropes 181:14 rotary-type 143:17 roughly 94:17 95:22 99:10 100:3,3 101:18 103:6 123:4 round 60:17 291:11 rounds 26:11 27:16 33:12,23 34:12 70:24 72:3 routinely 131:3 132:16 RPF 15:5 RUINING 1:7 rule 29:2,14,15,20 29:23 30:1,3,8 30:18 32:23 33:1,4,9,10 53:6 53:11,23 56:22 56:23 57:2,4</p>	<p>61:1,24 65:24 66:3,5,8,13,15 66:17,20 68:13 68:14,15,16,19 68:23 70:19,20 78:20 126:15,18 126:21,22 127:2 127:4,10,12 128:3,4,7,17 132:24,24 133:17 195:18 207:8,10 210:3 253:5 259:3,22 269:19 rulemaking 207:7 rules 24:18 28:16 56:17,20 68:10 133:3 140:6 176:20 185:22 186:3 192:14,14 194:8,20 195:2 195:17,19,21,24 207:16,20 208:14 210:13 212:2 220:11,16 234:11,18 241:6 242:4,11 253:4 254:2,16 265:24 266:4,16 275:15 276:12 291:4 ruling 261:14 run 61:3,17,19,21 61:22 68:1 71:3 177:11,12 178:5 running 257:10 runoff 25:21 26:3 26:3,7 27:16,22 27:23 82:22 runs 170:17 217:7 217:7 rural 13:2 Russ 2:9 6:14 188:19 192:22 228:9 232:7 236:9 249:19</p>	<p>258:23 259:8 261:10 263:14</p> <hr/> <p style="text-align: center;">S</p> <hr/> <p>S 4:11 74:8,8 163:20 saith 12:4 163:24 salt 15:19,21 76:9 76:20 77:4,15 294:13,14,17 299:20 salts 298:12,20 sample 26:11,15 50:10,12 51:3 61:11 63:7,10,11 77:22 192:6 193:4 sampled 23:14 52:20 65:16 121:18 283:8 sampler 143:10 samples 27:20,21 29:3 50:7,9 54:1 60:6,7,24 61:3 62:24 63:4,7,21 192:16 279:1 280:16,17 281:14 283:2 285:8 288:10,12 289:10,11 291:12 306:24 307:1,3,6 315:4 sampling 14:22 15:1 23:19 24:16 25:7,15 26:11,14 27:15 27:16 30:3 33:7 33:9,24 34:12 52:23 53:4,8,18 56:21,24 57:5,7 57:9 60:15,16,22 62:17 70:21,24 71:9 122:21 123:3,3 170:20 170:21</p>	<p>sand 18:12 19:3 19:14,24 20:6 144:15 148:1 243:23 318:7 sands 20:15 157:9 sandy 20:23 151:5 Sanitary 65:5 120:21 Sanitas 223:4 sat 132:22 satellite 123:20 satisfying 184:23 saturated 20:1,13 20:16 saw 7:11 13:3,4 22:22 48:16 122:16,17 151:2 151:2,3,17 196:20 201:20 207:5 209:4 314:12 317:14 317:16 saying 106:5 120:15 151:9 213:2 219:10 234:15 236:6 247:17 269:21 305:17 says 40:24 47:17 87:5 92:14 95:10 97:16 105:9 106:18 109:8,9 143:22 144:3,9 147:10 155:20 178:21 198:20 237:6 248:2,21 298:3 SB3 144:1 SB4 144:6 scale 92:14,14 93:2 94:19 97:3 97:6 99:13,21 102:1,4,12,15 106:2,3,6,11 114:8</p>
---	---	---	--	--

scenarios 247:19	298:17	155:7,11,14,22	294:15 300:21	38:4
schedule 141:3	sections 31:15,19	156:10,17 157:3	301:1 320:15,23	setups 43:4
scheduled 273:22	36:15,16,22 58:3	159:10 161:24	321:5	seven 287:4
scientist 74:5	59:3,3 69:22	166:18 167:10	sensitive 215:7	seventy-one 39:18
scope 38:12,17	71:12 72:21	179:19 180:18	240:6	Seymour 189:22
39:5 225:18	265:7 268:20	189:24 191:7	sensitivity 221:5	189:23 190:2,3
score 252:15,16	sediment 25:8	214:20 221:20	sent 7:4 274:6	190:16,18,23
scratch 33:7,14	277:13 278:17	224:1 232:17	sentence 83:16,17	221:11,19 222:1
screen 37:18	279:1 280:17	234:23 237:8	87:4,16,17,18	222:6 233:13,15
203:15 235:9	315:4	250:21 251:2	310:12,18	237:24 238:1
304:15 305:1	sediments 25:16	269:8 281:2	separate 34:24	256:3 262:9
sea 36:24 37:10,15	157:9 170:19	298:4 301:21,24	69:14 70:11,14	263:7,9
search 90:13,14	see 8:6,16 12:23	306:4 310:18	71:3 208:3	Seymour's 221:23
90:16 94:3	14:16 22:5,7,12	317:17	separating 318:14	222:11 238:4
96:16 97:11	22:14,21 23:1	seeing 23:4 54:8	separation 269:8	262:5,17
98:20 99:16	40:24 49:16,16	77:2 78:15	269:18	shallow 121:8
101:5 102:18,21	49:21 50:2 54:2	80:17 110:22	sequence 110:4	shame 143:7
103:16	68:7 82:22	111:8,23 151:20	113:15 152:24	Sharene 9:2,3
season 22:3	83:20 84:18,20	153:18 156:5	sequential 109:15	Shealey 9:2,3
second 18:11	84:21 87:8,23	206:20 287:6	series 80:3 108:16	197:5,8 294:23
85:23 87:4	88:17 90:14,16	304:23 306:20	109:4 191:7	318:17 319:12
92:18 95:24	90:22 91:6,7,15	seeking 7:5,7	214:1	320:4
109:20 124:17	92:15,21 93:2,4	174:21 267:21	serve 164:18	Shealey's 319:4
146:10 161:11	93:13 94:5,11,19	276:15	180:24 318:9	sheet 36:4,9 37:6
161:12,15,16	95:10,14,17	seen 13:8 22:1	served 174:23	37:12 87:19
189:21 191:24	96:17,20 97:3,12	86:4 119:9	service 18:18	215:18
198:11,13	98:7 99:3,17,21	120:4,17 156:3	24:24 35:18	sheets 36:1
215:23 250:23	100:7 101:4,11	157:7 196:24	36:17 37:8,13	Ship 65:5 120:21
258:18 265:5	102:12,18,24	243:19,20,21	38:6,8,10 39:15	shoreline 117:11
274:22 281:10	105:6,12 106:3	249:13 252:20	39:17 40:5 41:9	short 73:22 81:5
285:12 288:1	107:7 109:14,18	292:20 309:12	48:17 122:19	85:5 135:6
304:15 305:1,3	110:23 111:3	seep 156:1,8 196:9	set 36:14 39:24	163:2 264:21
310:11	112:6,12,16,16	196:10	62:22 63:4,21	shorten 140:9
Secondary 37:23	113:8,18,21	seeps 54:12 68:7,8	105:1 106:21	show 27:20 64:17
38:3 48:9	114:9 115:1,3,6	80:17 156:2,3	110:2 113:12	99:13 136:3,4
122:13	115:10 116:6,8	196:8,20,23	119:1 173:17	188:24 229:11
secondly 183:15	117:17 118:1,6	314:7	174:18 211:8	233:24 277:24
seconds 89:12,19	118:15 119:8,8	sees 155:22	219:19 296:13	278:5,20,22
89:23 90:2 91:9	120:16,22	selected 127:20	322:5	279:1 289:11
91:12	121:12 129:24	128:16 293:10	set-up 303:13	294:19 299:18
section 198:12,13	132:20 141:7	selection 169:9	sets 35:2	300:7 301:12
213:15 221:16	143:20 144:3,11	268:21	setting 214:4	showed 234:2
265:10,19	146:12 148:12	semi-annual 57:3	271:20 272:5	301:17
266:18,24	150:13 151:1,17	sends 210:22	301:1	showing 94:19
267:14 268:12	154:13,16,19,22	sense 270:19	Settling 37:23	118:22 153:19

203:15 271:22 290:22 301:4,13 312:15 shown 124:12 147:23 279:20 289:14 291:7 302:17 303:13 shows 36:19 52:10 97:6,8 102:1,15 136:15 300:4 301:6 308:1 316:5 shrinking 248:23 sic 51:21 side 65:7 67:14 83:19 90:14 101:6 111:10 124:7,11,21 125:7 128:22 145:3,15,16 156:13 162:4,10 169:4 191:24 209:17,17 211:3 223:20 233:18 271:23 272:19 272:22 273:7 274:15,15 278:6 301:2 302:14 320:18 321:7 sides 151:1 157:4 292:8 Sierra 1:3 6:13 signature 82:13 significant 227:13 227:14 253:24 257:17 264:12 significantly 262:21 signifies 147:11 silent 260:21 silt 18:10,12 20:6 siltier 318:8 silting 50:23 silts 157:9 318:7 silty 18:15,20	19:11,22,23 20:13,14,19 148:1 similar 16:17 24:15 31:1 32:12 52:18 65:14 67:11 70:17 120:6,17 181:24 201:9,19 221:1,17 229:19 229:22 289:10 simply 9:7 10:24 234:18 254:18 275:9 279:21 286:16 292:3 single 88:14,15 225:5 278:1 sir 9:19 158:15 sit 145:22 156:4 site 51:22,23 52:2 52:3,4,5 54:21 54:24 55:5 62:9 62:23 70:18 110:12 113:16 118:18 123:19 123:19 169:24 170:1,9 173:18 174:6 176:23 177:9,14 178:8 178:13,18 181:11,21 182:2 182:17,17 183:10 185:7,9 188:17 192:19 201:13 202:9 205:14 208:1,6,7 208:8,9 209:15 213:12 214:22 218:6 224:18 225:6 228:19 239:15 240:5 242:10 245:20 247:21 249:17 250:11 251:16 251:17,19 252:9	252:13 254:1,11 257:9 272:24 273:1,16 281:24 303:20,24 305:24 306:16 311:14 sites 174:3 176:21 177:1 178:6 183:14 185:17 185:17 190:15 200:16 201:8,17 204:15 205:4,5 208:13 212:14 213:20,22,24 214:4,21 215:20 217:2 218:10,20 218:22 222:10 228:16 239:5 241:9,20 242:1,6 243:21 245:14 247:2 248:17,22 250:9 251:11,13 252:3,8,11 256:22 257:15 257:19 260:14 260:15,17,22 261:24 265:17 268:8 sits 19:1,8,8 24:13 situation 170:2 184:24 201:14 229:14 232:6,8 236:2 254:23 situations 244:4 265:17 six 51:8 62:23 112:23 113:12 144:8 287:10 sizable 317:22 size 36:5 144:16 148:16,17 150:14 sizes 121:11 144:15,15 sky 115:9	slag 87:21 150:21 150:23 151:9,10 151:15,16,18 243:22 slash 89:5 91:3 93:23 96:10 98:17 100:17,20 slew 61:15 slide 204:12 208:21 211:3 213:10,12 217:9 218:14,14 222:17 226:13 238:11 241:2,2 253:4 271:7,7,16 277:9 279:14,20 280:4,4,5 283:1 283:15 285:12 285:21,21,22 286:20 287:6,6 287:24,24 288:17 289:1 290:21 291:14 293:4 294:5 299:23,24 306:7 312:12 313:10 313:10 slides 314:19 slightly 23:4,6 24:23 26:1 53:22 90:21 slope 54:11,13 68:7 sloping 318:11 slow 295:24 slurry 22:17 small 13:22 293:24 smaller 246:9 304:10 soft 157:9 186:12 software 223:4 soil 13:3,5,8 151:6 277:12 278:15 280:16 303:10	306:23,24 307:1 310:3,14,16 313:24 316:12 316:13,17 317:9 317:11,15 318:8 soils 148:6 287:15 287:21 309:4,5,6 309:7,15,19,22 314:15 solid 151:21 185:19 202:7,7 202:13 solids 193:5 solves 270:20 somebody 123:13 155:14,20 156:9 somewhat 31:21 34:2 65:3 67:23 76:22 239:11 sooner 104:11 sorry 18:12 36:16 36:18 38:16 39:12 69:6 75:11 76:12 86:21 87:17 88:14 97:7 100:5,21 106:22 109:24 123:19 131:11 143:13 146:10 150:18 150:20 175:13 180:14,20 199:1 227:11 235:14 268:14 299:7,9 302:18 309:2 317:4 sort 7:23 14:2 182:5 200:2,10 208:8 287:13 311:7 sorts 215:18 sought 295:7 sound 45:12 source 74:21 75:5 75:8,15,19,22
--	---	---	---	---

76:1,5,8,14 77:3 77:6,14 78:12,12 78:17,21 193:21 198:8 217:16 218:2 244:20 245:11,16,21 246:1,5 250:17 250:18 274:8 294:9 298:9 300:17 304:11 304:11 308:2 309:7 311:1 315:24 316:2,16 316:18,23 sources 219:4 297:11 305:24 309:5,6 south 3:6 13:18 25:24 51:23 52:1,4 56:13 65:6 66:1,1,14 66:18 69:13,13 69:15,16,17 70:1 70:1 71:1 127:3 127:4,13,13,21 127:21 128:15 128:16 153:3,5 154:7 272:18 289:9 291:9 southeast 80:24 southwest 284:9 284:13,15,19,23 285:2,10 space 89:3,5 292:24 sparkly 151:4 speak 25:18 38:15 180:12 319:12 speaking 28:20 29:12 56:18 268:19 319:6 specialty 34:5 58:4 71:11 167:20 specific 32:14	77:11 78:20,21 79:21,22 126:4 168:12 239:16 254:12,15 268:14 290:1 293:15 307:9 specifically 80:10 155:17 189:14 245:23 248:3 256:7 268:19 specifications 169:7 specified 26:12 29:2 53:16 specify 254:3,6,10 255:4 speculate 117:2 speculation 155:4 spell 268:21 spelled 178:23 spells 178:17 spend 32:7 35:13 58:15 59:14 123:15 spent 71:23 73:5 spin 145:15 spinning 143:16 145:13 split 139:19 splits 111:18 splitting 140:16 spoil 156:22 spoils 319:9 spoils 50:12,12,14 50:18 51:1,4 107:21 108:7 157:6 spoke 253:3 sporadic 310:13 spot 115:18 285:1 spread 15:17 47:5 47:6 285:4 SRP 55:1 56:8 181:14 206:6 208:12 209:23	231:21 240:13 272:24 273:2,12 SRP/TACO 256:11 SRP/TACO-type 255:13 stability 125:21 126:3 248:8 249:9 staff 74:4 stage 40:2 42:21 44:14 280:4 stages 43:11,16 stain 196:15 stalled 147:17 stand 89:9 standard 22:23 23:1 173:24 207:17 214:23 217:21 219:8 222:9 276:14 290:12 291:21 295:7 297:7,21 298:18 299:2 303:3 standards 169:2 170:1 173:24 200:5 206:23 209:22 219:3,6 219:14,23 220:22,24 221:2 221:6,7 229:11 265:17 279:5,7 281:18 285:16 285:19 288:21 288:23 289:7,14 290:20 291:19 291:19 293:20 294:3 standing 112:13 156:13 standpoint 321:5 stands 61:8 308:12,13,13 start 9:5 12:19	27:2 33:6,14 34:13 50:23 73:18 81:1 84:2 84:4 100:6 111:23 144:19 152:14 started 12:22 21:4 53:7 181:12 271:24 272:1 starting 53:4 144:19 164:6 305:3 starts 36:1 59:19 state 28:15 29:14 30:2,18 33:1,4 33:10 56:16,22 57:4 66:13,15,17 66:20 140:19,22 141:3,10,17 169:23 171:9 180:9 183:19 188:6 192:14 193:18 194:11 194:13 195:2,9 195:21 204:21 206:3 207:3 209:4 219:5 266:4 275:14 277:5 300:10 state's 208:1 stated 10:14 14:21 42:13 160:20 262:8 271:8 statement 260:24 states 37:19 43:5 105:7 149:14 171:8 260:10 298:15 statewide 305:8,9 305:10,21 static 239:11 stating 225:14 station 13:14,17 14:16 15:3,15 21:3 27:5 28:18	30:9,13 34:18 35:16 40:7,21 41:11 44:14,16 47:21 49:13 51:14,16,19 52:7 52:9,10,20 54:1 54:5,17 55:24 56:17,18 57:12 60:4 64:13,19,22 65:1,2 66:21 68:12 136:5 170:11 195:24 211:5 215:16 233:11,21 271:8 271:21,22 272:6 272:9,11,15,20 272:22 273:4 274:4,9 279:2,10 279:20 283:11 286:4 295:8 297:7 298:12 300:15 302:14 310:15 312:18 313:7 314:1 315:21 stations 44:18 65:15 68:11 77:7 165:15 166:4,5 168:8 170:11,13 182:22 190:13 192:15 193:18 194:3 195:15 196:20,24 197:8 197:11 199:18 204:9,19,24 206:11 207:12 207:21,22 211:5 211:9 212:4 214:15 215:5,11 216:13,15,16,20 220:1,6 222:5,24 224:6,8,10 225:15 226:3 230:2,23 232:9
---	--	--	--	---

233:5 238:23 239:1,17 240:19 242:10 248:13 249:3 251:13 253:2 254:24 255:18 260:3 264:15 266:5 274:21 282:20 316:4 statistical 70:23 205:22,24 221:17 222:21 223:3,5 226:14 226:24 227:1 228:14 237:8 statistically 63:1,8 63:19,23 227:13 227:14 statistics 33:24 status 72:8 197:7 197:11 198:3 275:13 stay 293:21 steel 245:18 steep 54:11 154:24 steeply 67:19 stem 145:11,19 147:9,11,12 stenographic 322:3 step 214:22 step-by-step 178:19 steps 178:17 179:13 195:8 207:14 213:5 229:9 238:15 242:2,4 254:21 255:9 stipulation 40:4 41:8,8 Stone 304:2 stood 306:14 stop 53:19 103:8	140:21 141:11 141:14 153:4,24 stopped 80:9 stops 79:10,13 Storage 247:2 stored 305:22 stormwater 26:3 27:23 straight 112:14 strategies 169:1 243:13 250:8 strategy 169:24 174:16 206:6,24 242:14,24 247:20,21 250:6 250:22 253:1 256:11,21 stream 244:18,19 Street 1:16 3:6 stressed 314:13 strictly 143:17 strike 136:23 174:14 strip 136:10,15 137:2,9 structural 31:16 structure 14:10 178:15 struggling 138:19 studies 276:7 study 225:15 256:24 257:4,5 281:21 stuff 8:21 subdocket 207:6 210:2 subject 165:16 233:7 257:17 submit 57:5 85:20 submittal 31:23 35:2 58:11 72:11 submittals 130:2 174:17 195:5 submitted 21:1,2	26:13 31:17 195:1 subscribed 322:14 subsequent 296:21 subsequently 289:15 310:1 subset 60:5 61:2 substantial 223:23 224:15 314:14 substantially 308:11 substantive 161:1 Subtitle 185:23,23 successful 249:14 256:16 succinctly 310:24 sufficient 226:2 226:11 283:10 315:19 sufficiently 235:1 suggest 8:5 48:17 279:9 314:13 suggested 262:13 267:3 270:3 suggesting 269:16 suggests 317:22 suitability 248:4 SUITE 2:10 3:7 sulfate 305:7,11 305:13 306:3,13 306:19 307:2 308:2,12 310:13 311:1,8 312:2 sulfates 310:3 sulfide 309:10,16 309:23 310:6 311:23 sum 224:12,12 313:15 314:17 summaries 57:6 summarize 280:14 310:21 summarized	235:17 240:22 summarizes 310:24 summary 27:14 30:4 167:15 215:14 271:19 290:23 313:17 summation 277:12 313:5 sun 115:20 Superfund 51:22 52:3,5 247:1 251:11,13,16,19 252:3,13,17,24 Superfund-type 257:7 supply 283:21 support 43:14 130:5,8 166:7 263:3 264:7 297:6,17 supporting 165:2 supportive 250:5 supports 297:15 suppose 176:6 sure 13:18 18:9 31:9 39:8 42:6 43:8 46:23 51:6 66:19 80:23 84:15 85:11,24 103:15 111:16 135:3 155:21 186:13 246:19 304:21 surface 26:3 113:18 119:7 120:11 145:16 170:18,19 196:14 204:21 205:15 209:2 210:13 215:15 215:24 218:16 218:20,23 219:4 219:11,12 240:1 241:3,16 254:3	280:16 315:5 Surge 18:18 21:16 22:16 26:1 30:15,23 31:10 32:1,9 34:22 36:16 surprise 131:4,5 132:19 157:4 surprising 176:2 surrounding 13:17 214:6 217:1,4 263:2 264:2 272:10,15 survey 25:7,14 40:1 42:19 164:24 surveyed 36:24 37:1 136:7 surveyor 37:1 suspect 237:2 279:12 Sustained 17:11 31:7 45:16 228:11 236:12 swear 163:10 sworn 11:16 12:4 163:13,24 system 33:3 39:24 62:11 66:4 107:18 186:23 186:23 187:2,15 245:22 246:9 systems 185:11,16 186:17,19 224:9 250:14
T				
T 3:3 4:9,11 12:2 12:5,5 74:8 142:16,16 164:1 164:1 tab 18:6 35:22 40:13 41:7 51:8 64:14 166:13 180:1 188:24				

198:11 203:14 257:21 265:5 294:21 table 19:23 27:10 27:13,14 131:21 132:1,2,3,15,18 215:24 244:11 276:20 296:14 TACO 173:9,16 173:23 181:12 181:15 208:2,12 209:23 231:21 231:21 316:6 TACO-type 206:6 240:13 tactical 185:4 tailings 243:23 take 10:24 17:20 60:17 61:11 62:24 63:19 70:8 73:17 84:15,23 88:5 104:21 108:21 115:13 145:5 152:19 153:4,24 155:13,21 160:8 160:23 174:4 178:18 185:1 191:23 201:21 211:9 213:6 214:19 229:9 231:6,7 254:21 265:7 285:6 307:3 taken 1:14 50:7 73:23 108:21 109:10 110:10 111:5,17 114:24 118:23 135:7 137:17 154:6 155:12,16 156:6 163:3 197:4 207:14 213:8 242:3,4 264:22 290:2 303:23	takes 123:4 202:11,12 243:1 243:4,8 256:13 talk 14:19 140:4 192:5 216:15 278:3 talked 121:17 132:15,18 196:7 208:18 211:4 237:10 242:16 253:10 266:24 285:4 314:18 talking 122:7,11 159:9 177:20 186:16 304:10 talks 217:13 Tank 247:2 tannery 51:22 54:22 55:15 56:6 TDS 306:13,19 308:2,12 310:3 310:13 311:1,8 team 166:7 181:2 technical 132:17 166:6 169:7 190:15 204:1 252:13 256:14 297:13 310:23 technically 170:6 259:4 260:3,12 261:19 263:5 technologies 36:12 182:13 technology 143:9 143:12 tell 9:8 80:4 84:13 111:2 112:24 114:8,12 117:6 117:16 124:6 148:15 158:4 164:13 167:12 170:14 233:3 254:16 290:5 tells 9:8 158:9	198:7 temporary 303:12 307:3,4 ten 73:21 144:18 224:8 264:19 268:8 tend 144:17 169:22 177:10 Tending 226:14 tends 78:16 term 51:3 143:14 145:10 178:9,20 202:17 terminal 14:4 terminology 83:1 83:9,10,12 terms 89:15 111:8 112:7 120:7 145:17 169:6 170:21 174:14 185:18 186:5 192:12 204:18 209:2,8 211:14 221:6 222:2 223:18 225:6 227:6,24 237:17 237:22 250:15 254:9 261:23 272:10 275:12 275:16 282:11 287:14 302:19 303:14 306:15 test 60:6,7 61:4,6 61:7,9 62:2,3 77:9 226:22,23 226:24 227:5,16 230:13,14 236:21 286:24 286:24 288:12 289:8 testified 16:4,24 54:15 80:17 126:11 132:22 156:20 190:4 193:16 197:9	201:24 222:22 222:22 259:16 267:24 302:13 314:8 testify 197:6 216:14 testifying 107:6 220:11 testimony 14:20 54:17 76:7,15,17 76:22 80:16 115:12 135:21 156:22 173:9 179:2 191:16 193:6 196:21 220:20 257:2 267:18 286:21 292:17 302:5,9 303:22 315:8 317:7 318:17 testing 61:9 77:1 77:7,9,9,12 206:1 223:5 226:20 228:14 228:18 229:2 230:20 233:8,10 233:22,24 234:13 238:17 249:5 288:19 290:13 testings 229:11 tests 227:19 308:18 text 265:7 thank 6:16,21 7:17,18 8:20 9:19 10:22 11:7 11:17 12:7 19:10 28:6 31:7 46:4 48:20 51:5 64:5 65:14 73:21 81:23 95:7 97:10 102:11 104:4 105:1 119:11,15	128:11 134:5 135:9 137:14,20 142:10,11 149:2 158:16 160:22 162:11,17 163:14,16 180:16 186:12 188:22 189:6 193:1 203:13 259:24 261:14 264:20 265:1,2 296:2 297:4 321:21 Thanks 74:6 thickness 317:19 thing 9:17 29:14 44:7 109:12 155:16 things 8:23 77:17 120:23 164:22 207:15 208:4 217:14,23,24 218:5 240:21 244:11 think 9:17 11:11 16:24 19:7 47:11 49:5,5 50:17 52:6 74:17 112:21 122:3 131:7,16 131:16,24 134:16 142:6,14 145:9 161:1 175:24 179:21 180:18 185:11 185:20 194:7 199:15 207:5 218:18 220:18 220:19 222:1 226:16,17 227:22 234:17 234:23 239:2,3 240:12 249:4 250:1 253:10,11 262:8,20 266:6
--	---	---	---	--

269:13 271:4	83:13 104:12	313:2,24	229:2,11 230:20	80:12 92:17
273:23 277:24	134:5 138:17	topsoil 317:19,21	233:21,23,24	93:11 94:21
291:17 297:17	139:21 140:7	317:23,24 318:6	234:6,13 235:22	96:13 97:10
297:18 307:23	142:5 153:4	total 24:20,21	236:1,7,8,14,21	102:12 103:7
308:21 312:4,7	156:10 160:8	29:1,1 53:8,17	238:2,4,17 249:5	105:3 113:9
314:9 319:23	164:19 167:17	53:21 66:9	trends 205:22	114:17 125:11
thinking 92:9	181:13 186:20	193:5 224:12	206:19 215:6	144:1 145:23
116:5 128:19	189:18 190:11	287:10 289:16	227:7,24 228:20	146:9,15 149:1
thinks 8:6	201:10,21 214:1	306:23 312:19	234:4,5 236:1,16	149:10 152:19
third 98:7 191:5,6	219:19 230:8,11	313:16 314:17	236:17,19	153:14 154:6,9
203:14 204:5	230:12,17	totality 214:14	237:22	154:14,14
Thompson 1:16	237:19 238:24	250:20 278:2	triangle 217:13	157:16 166:12
thorough 60:22	239:1,6,8 243:1	282:5 313:16	218:1	188:23 189:2
288:6	243:4 244:21,24	315:15	triangular-shap...	203:14 258:17
thought 103:18	245:3,5 253:11	touched 16:2	84:18,19 85:1	269:3,5 271:6
179:5	264:18 283:5,10	208:17,23	tricky 202:21	277:8 285:20
thousand 34:15	293:21 312:4	toxicity 221:4	tried 150:3	294:20
72:1	322:5	track 152:22	truck 263:13,19	turning 18:6
thousands 224:13	timeframe 21:5	215:19 229:12	320:9 321:6	93:10 94:2
253:11	21:20 72:13	traditional 208:7	trucking 14:4	95:23 98:3
three 35:1 51:8	timeliness 141:5	240:13 256:10	truckloads 289:16	99:15 100:5,6
60:5,5,7,24 61:2	times 123:7 139:1	transcript 1:14	trucks 263:2	105:17 112:8,22
68:11 70:15	152:18 243:3	10:5,10,14,16	264:1,4	113:23 116:1
78:6,8 90:10	267:19 291:2	322:7	true 88:1 218:6	119:1 150:10
102:9 138:2,3	314:10	transcripts 191:7	316:19 322:7	166:23 179:23
139:2,10,10,14	tipping 34:15 72:1	191:10,11,13	truly 62:10	204:3 218:13
139:15 141:7	title 167:8 251:5	transient 75:22,22	trust 117:17	222:15 226:12
142:5,7,9 173:16	322:6	76:5,8 78:12	try 45:18 118:18	271:11 280:3
199:18 204:16	today 6:8 74:4,12	302:20	141:23 174:13	287:5,23 288:24
217:14,22 218:4	119:24 121:17	transparent	178:22 182:8	290:21 299:22
242:1,9 248:2	122:8 125:12	138:12	217:24 224:14	313:9
275:9,13,17,22	185:8 187:16	transport 87:21	270:11 296:4	two 8:23 21:9
276:5,24 291:9	272:12,23	295:19 296:5	306:17	44:18 49:20
three-inch 16:12	told 139:9 142:5	298:3	trying 129:24	50:4 51:8 60:23
17:17,18 32:4	tomorrow 138:1	travel 263:13,19	150:5 151:7	66:6 102:9
58:11 70:3 73:3	138:16 260:18	treat 32:20 259:2	155:19 156:5	124:9,24 138:6
thrive 317:21	321:14,19	260:2,11,16,21	269:11,20	139:1,10 140:9
tie-in 244:9	tool 143:15 206:3	261:19 262:1	287:13	150:6 154:3
tier 173:14,16,23	top 19:19 37:13	treated 274:7	turbidity 29:22	158:20 163:7
tiered 173:11,14	37:14 49:17	treatment 51:24	turn 15:7 24:24	164:3 177:5
tiers 173:16	79:18 106:3	259:7 267:6	25:20 26:19	193:8 204:20
tilting 180:18	112:14 145:22	trend 190:18,20	27:10 35:21	208:3,3 226:7
time 7:24 22:11	148:23 157:10	215:7 226:14,20	36:4 40:12 41:7	239:2,3 243:12
22:24 29:4 40:3	158:9 275:5	227:9,10,10,12	59:16 74:14	247:19 253:15
53:9,17 71:23	277:3 301:2	227:13,14,14,15	75:1 78:22	279:4,9 296:20

<p>type 13:22 17:17 53:24 56:24 73:3 77:11 112:17 144:18 148:8 153:5 157:3,6,11 168:15 169:23 170:15 184:22 208:12 229:5 231:22 263:3 271:5 294:14 299:20 320:24 types 169:17 212:9,11 217:24 222:9 243:13 244:4 250:8 252:2 255:19 311:8 typical 44:6 170:3 270:8 311:12 typically 174:12 174:20 196:10 203:1 231:9 234:21 252:4 311:9 317:18 321:1</p> <hr/> <p style="text-align: center;">U</p> <hr/> <p>U 163:20 ultimately 169:10 172:20 181:23 182:16 185:5 187:12 200:20 212:2 240:7 273:2 309:22,24 310:8 316:15 unacceptable 248:10 uncommon 174:17 undergoing 168:6 undergone 227:21 Underground 247:2 underlies 18:17</p>	<p>18:21 underline 18:21 underlying 20:15 87:21 271:2 309:8 underneath 19:4 97:16 underreported 262:22 understand 39:1 218:24 231:14 240:1 267:24 273:10 287:12 287:13 293:9 understanding 15:22 24:10 25:18 26:2 43:2 43:15 62:5 67:10 72:23 76:21 83:13 122:6 126:1,5 136:6 175:10 190:4 197:18 198:1 210:8,16 211:1 214:2,6,20 218:6,21 245:3 258:8 261:22,24 269:11 281:22 282:21 286:9,12 292:11 298:22 319:18 320:20 understands 202:2 understood 266:15 319:14 320:8 undertook 182:24 201:20 231:10 undeveloped 65:8 unfortunate 9:11 unfortunately 10:2 unidentified 245:24 Unified 227:3</p>	<p>unique 250:12 uniqueness 200:17 unit 18:11,13,15 18:17 19:1,6,8,8 19:11,14,18 20:6 20:6,23 89:1,1 253:21 254:7,9 254:12,21 300:21 309:11 United 43:5 units 21:9 165:2 172:2 177:4 204:23 209:15 211:21 212:4,15 239:9 255:5 266:6,17 unreasonable 256:6 unsaturated 20:2 unwise 270:10 upcoming 207:6 update 180:8 199:16 updated 215:10 215:14 updates 215:20 upfront 72:3 upgraded 275:20 upgradient 78:15 78:17,18 231:11 237:17 291:21 292:6,9,11,15,22 305:19 upgrading 287:19 upheld 132:19 upload 8:2 upper 16:16 17:23 32:16 34:14 73:7 90:13 92:20 94:3 95:5 95:11 99:17 101:5 102:19 106:18 115:7,8 115:11,23 281:3</p>	<p>uppermost 300:21 upstream 40:7,21 44:15 upward 227:9,14 227:15 234:4 236:17 use 14:4,5 24:6 46:17 54:20 55:7,13,20 56:2 62:1,4 67:4 76:19 83:9 104:7 121:9 139:20 143:22 168:14 173:20 182:7 189:11 201:15,23 202:3 210:7 220:1,7 230:19 231:15 233:9,12,13 246:24 251:9 259:9 272:10 273:3,9 283:23 284:1,3 286:3 299:21 useful 214:7 282:3 303:14 312:8 USEPA 75:4 226:24 246:23 251:8 259:3 299:5,10 users 214:11 217:5,6 uses 168:2,5 214:6 217:1,2 299:14 USGS 43:1 44:3 158:14 usually 118:18 148:15 178:23 196:14 208:7 231:14,15 utility 67:24 utilize 228:17 utilized 202:8 223:3 227:16,19 259:7 300:17</p>	<hr/> <p style="text-align: center;">V</p> <hr/> <p>vacant 272:16 value 104:4 236:18 305:10 305:21 values 305:6,8,14 Vanessa 74:3 variability 63:1,3 63:5,20 variable 198:9 variables 245:7 264:9 various 13:22 39:23 42:19 62:6 121:11 151:17 154:1 170:5 192:12 195:23 222:24 239:16 269:16 279:18,21 293:14 313:8 vary 169:20 250:18 vegetation 118:23 154:24 155:1,2 155:12 156:14 314:9,13,16 317:14,16,18,20 317:21,23 VERMONT 2:10 versus 29:16 171:4 192:5,20 193:4 208:20 230:8,11 vertical 37:4 288:10 vertically 63:18 viability 286:1 288:5,7,8,14 viable 262:2 286:18 vicinity 287:15 309:13 314:22 victim 207:13 view 112:18,19</p>
--	---	---	---	---

120:12,14,19 168:7 viewed 54:6 viewpoint 235:16 violation 200:7 violations 134:8 virtually 135:2 visible 54:13 110:19 112:9,20 113:1,13,24 114:13,20 116:2 117:6 119:3 visited 35:15 51:15 314:12 visits 54:5 visual 203:23 230:12,14 277:24 279:21 voice 186:8 volume 8:2 304:11 304:11 voluntarily 179:14 211:20 213:1 voluntary 23:18 52:23 65:18 169:23 178:15 207:14 208:1 291:5 vs 1:10 vu 162:6	walked 81:15 92:2 155:6 156:16 walking 120:20 121:14 125:4,7 152:15,23 walkover 110:15 walks 118:18 120:7 wall 125:22 126:2 151:21 want 7:2 9:9 10:4 14:19 15:7 24:24 25:20 35:21 36:4 45:18 46:21 49:19 73:17 88:5 117:2 118:24 125:11 126:10 130:2 135:2 138:7,11 146:15 147:4 149:1 180:8 213:17 243:7,8 265:6 316:21 321:3 wanted 65:19 198:14 218:23 222:10,11 223:14,16 242:16 warehouse 273:3 warning 78:3 warrant 178:19 warranted 268:9 wash 87:20 WASHINGTON 2:11 wasn't 25:16 70:19 103:15 125:19,23 155:18 188:9,9 225:23 236:23 262:1 265:24 266:16 267:12 272:8 283:17,20	waste 183:20 185:19 196:12 202:7,7,13 234:12,20,22 235:2 243:15,24 244:10,12,13,14 244:18,19 252:2 252:4 wastes 252:5 wastewater 51:24 water 18:18 19:2 19:4,5,23 20:18 20:20 22:7,12,15 22:21 23:3,4,9 24:24 26:16,16 27:22,23 35:19 36:17 37:8,13,22 38:6,8,10 39:15 39:17 48:16,17 48:18,19 50:21 55:21 115:14,24 122:11,17,19,22 123:10 170:18 196:17 205:15 217:5 218:16,20 218:23 219:2,3,4 219:7,9,11,12 220:5 221:1 244:11 259:6 267:6 283:21 300:17 waters 170:19 waterway 121:15 Waukegan 51:14 51:15,19 52:7,9 53:3 54:1,16 55:24 56:1,18 57:12,17 58:8,14 59:7,9 60:4 125:11,12,16 138:9 166:4 197:22 216:23 way 20:4 33:17 45:7 47:19 56:12,13 81:5	111:13 117:24 119:5 140:11 141:1 143:7 147:5 152:22,22 161:18,18 195:14 212:3 225:21 226:7 231:20 235:17 236:4 265:15,21 266:2 267:2 271:18 282:19 301:5 318:10 ways 255:21 WCG 237:6 WCG's 297:15 we'll 162:24 316:4 we're 137:19 140:3 175:13 177:13,19,19,24 We've 162:8 240:3 Weather 40:5 41:9 weathered 148:10 148:23,23 Weaver 164:3,10 164:14,15,19 165:5,6 166:12 167:17 180:23 181:10 185:6 187:22 188:5,9 237:6 249:2 Weaver's 165:8 website 7:24 43:23,24 44:2 299:17,19 week 9:20 72:12 123:4 127:6 130:12 131:12 132:9,23 138:21 138:23 139:4,20 weeks 13:13 150:7 well-vegetated 68:7 wells 29:4 33:2,6,8	33:11,23 34:12 54:16,19,21 55:11,14,21,21 66:3,17 67:20,22 68:2 69:1 70:16 71:8,21 78:16 124:7,12,20,23 125:9 188:13 205:17 211:23 219:22,24 220:7 223:17,19 224:10 230:19 231:11 232:12 232:24 233:3,5,7 233:10,11,13,14 233:16,17 234:24 237:7,15 237:16,18,20,20 237:22,24 238:2 270:1,16 277:13 280:15,21 281:10,15 283:8 283:21 291:7,8 292:1,6,6,11,16 292:21 295:22 296:8 298:10,19 300:11,14,15 301:16 302:15 305:7,12 307:3,4 308:14 312:19 went 9:21 12:10 122:1 156:15 201:19 215:1 232:9 weren't 62:19 208:14 220:5,22 307:21 309:20 west 1:16 13:23 19:13 20:21 26:1 51:22 52:13 54:22 57:21,23 58:21 60:8,8,11,11 62:13,14 65:4,13 67:14 68:2 81:2
W				
W 90:24 163:22 W88 89:5 93:23 96:10 98:17 100:17 wait 86:13 137:6 141:10,17 159:7 waiting 7:11 walk 80:23 84:2 109:11 110:12 120:13 152:9,14 154:19 155:19 155:20 156:6,10				

84:2,5 105:11 124:7,13,17,21 125:7 152:17 153:5 154:22 272:21,24 273:4 289:9 western 124:21 wet 147:24 196:15 whatnot 81:12 83:12 115:21 121:9 141:12 143:11 157:10 whatsoever 68:8 white 115:18 wide 61:12 150:16 Wiedenhaupt 1:21 322:2,22 WILMETTE 2:4 wind 15:3 121:19 121:23 122:4 286:7,10,14,14 windshield 15:4 winter 15:18 Wisconsin 180:9 witness 4:2 11:14 11:15 12:3 45:22 48:5 60:1 92:7 97:18 108:1,3 110:1 135:14 140:22 155:9 159:23 162:23 174:24 witness' 49:2 witnesses 9:1 139:21 140:18 163:7,11,23 164:3 199:21 259:9 woke 9:3 word 46:17 79:24 173:9,10 297:19 work 8:2,11 17:6 28:14,17 32:17 36:13,13 56:15 56:19,19 68:10	68:18 83:5 126:15 129:11 168:21 170:15 170:16 174:3 181:3,19 188:4 193:17 196:2 213:2 282:1 314:24 worked 129:13,16 171:1,11 176:14 177:3,7 181:17 184:11 202:14 216:7 working 55:15 166:6 169:21 172:14 176:18 177:1 212:7 worse 249:8 wouldn't 112:6,11 112:15 113:2,8 113:17 118:3 189:18 320:8,14 320:16 wrapping 135:2 write 45:23 106:17 writing 71:12 83:8 written 46:15 wrong 159:9 199:2 wrote 69:21 82:11 92:3 159:5 <hr/> X X 4:1,11 12:5 74:8 142:16 163:22 164:1 <hr/> Y	17:18 21:5 71:19 91:10 97:19,20 103:23 106:13 115:20 115:23 116:16 127:23 131:15 134:15 136:21 139:5,18 140:3 141:20,21 147:18 159:2 162:6 180:18 181:9 182:3 188:19 198:24 224:4 225:20 229:4,18 232:20 238:6 259:20,23 263:21 274:3 282:23 286:11 294:2,8 296:19 297:22 298:24 300:12 304:24 307:18 308:9 315:13 317:17 321:12 year 122:24 123:7 123:16 181:11 197:20,24 314:11 315:1 years 109:12 162:7 167:20 176:20 177:3 197:17 224:8 239:2 253:15,18 268:9 279:19 yep 115:13,14 183:7,7 184:5 <hr/> Z	06.732 98:18 06.947 100:18 084-004725 1:22 <hr/> 1 1 66:14,14,18,18 69:14,15 71:1,1 88:19,23 90:18 91:20 92:3,23 93:8 180:2 237:16 275:10 275:23 276:5,8 281:17 285:15 285:19 288:20 288:22 289:7,13 290:11,19 291:19,21 294:3 303:3 1,000 92:15 99:13 102:1 1.3 198:12,13 1.5 213:15 1:00 138:7,8,15 1:10 137:20 1:46 163:6 10 3:6 40:4 55:11 102:12 106:10 136:21 144:5 150:16 156:13 181:2 271:7 274:19 292:16 10-acre 60:19 100 1:16 239:3 100,000 63:10 1004 2:3 101 259:22 301:14 108 4:20 108284 110:18 108285 111:2 108292 111:2 108293 153:18 108302 112:9 108305 154:16 108313 112:23 108318 112:24	108323 113:9,12 108328 113:12 108329 113:23 108335 114:18 108337 116:2 108338 117:5,8 108340 117:15 108341 117:18 108342 118:1 108343 118:4,8 108344 118:14 108345 117:5 118:17 108350 10:9,11 108351 10:8 108352 10:12,15 108375 10:16,17 108382 119:2 108386 10:18 108393 119:2,5 11 41:9 55:11 66:3 147:20,23 148:13 271:12 291:7,12 292:16 293:5 1100 2:10 1102 235:4 269:4 1104 246:18,22,23 247:11 1105 251:1,5 1110 304:17 114021 76:2,2 119 5:13 12 4:4 10:14 55:11 66:4 181:2 277:9 312:19 12(d) 198:18,21 122708 297:23 129 4:21 12C 146:4,4,24 12th 1:17 6:8 13 55:13 61:14 66:17 67:20 154:9 279:14 13-15 1:10 6:5
---	---	--	--	---

13-15_48742 27:11	59:18,20,22 64:1 64:7,9	1703 5:4,17 257:22 258:2	146:16 150:11 150:13 160:11	183:21 186:4 189:22 251:8
1307 18:7 49:14 124:2,4	1518 4:19 90:5,11 94:3,22 96:14	261:8,13,16 18 247:9,11	188:24 258:19 258:19 265:10	2016 272:9 2017 164:17
1310 51:10	97:11 98:21	306:23	275:10,13,15,23	2019 37:18 47:6
1314 64:17	101:4 103:10,19	19 290:21 293:4	276:5,8,10 277:5	77:20 138:20
134 5:14	106:10 135:17	298:23	277:7 295:17,21	158:6 165:11
147 :7 55:12,12 66:17 67:20	136:19 159:4	1943 47:5,7,12 158:6	296:7,9 297:10	276:10 304:14
280:4 283:15	160:10,18,24	19442 87:4 88:15	298:11,19,21	312:4
142 4:6	161:4	19443 87:4 88:15	2-0-2-1 297:3	202 2:12
14A 289:2,6	1519 4:20 5:13 108:10,12,15	98:5 100:7	2.1 265:19	2020 46:19 165:12
15 40:16 55:12 66:18 67:20	109:8 119:12,16	19444 82:14 105:4	2.2 266:19	193:13 199:7,8
84:9 105:18	119:19 152:2	1960s 272:7	2.3 267:14	306:11 312:7
106:22 144:4	153:6 154:9	282:24	2.4 268:12	2021 18:13 51:14
156:13 161:23	1520 4:21 5:14 129:2,5 132:12	1978 275:18	20 10:17 148:20	64:20 66:11
285:21 288:9	134:19,22	1990 164:17	227:1 299:24	77:17 126:24
1502 74:15,20	1521 4:22 5:15 159:13,16,19,22	1995 164:16	200 93:2 97:6	278:12 297:1,8
1503 146:17,19,21 147:2	159:24 161:7,22	1996 181:10	99:21 102:15	2022 40:4 41:8
1504 78:23 79:1 142:21	162:10,13	1998 280:7,10 281:20 282:2,9	106:11 291:21	47:8 158:8
1511 80:13,16 83:24	159 4:22	282:14 283:19	2000 47:6 164:16	295:12
1512 81:14 83:24	16 161:19 287:6	283:20 284:1	20005 2:11	2023 1:18 6:8,8
1513 9:21 106:24 107:1 109:3,5,9	16-503 321:21	285:18 319:20	2004 285:24	273:23 282:10
109:16 152:2	1605 294:22	319:24	286:15 288:4	322:15
153:14 154:14	162 5:15	1999 83:5 247:3	2005 287:6,8,18	203 5:3
1514 4:14 5:8 26:20,23 28:2,8	164 4:9	272:8	2008 275:22	209 10:6,10
28:11	166 5:2	19th 6:8 10:6	2009 12:21,23	21 10:10 265:4
1515 4:15 5:9 40:9 40:17,18 41:22	17 79:10,14 287:24	1N 70:12 71:15	82:22 149:7	306:7
42:11 44:4	1701 5:2 166:17 166:20 189:2	72:5	227:1 315:11	21(a) 198:24
46:24 47:5	221:16 232:16	1S 70:12 71:15	317:7	210 10:14,17
48:22 49:7,9	265:4 268:12	72:5	2010 23:13,15	21st 18:11 247:3
157:16,19 158:5	271:14	<hr/> 2 <hr/>	52:20,22 65:15	295:12
1516 4:16 5:10 41:13,16,18,22	1702 5:3 203:11 203:17 213:13	2 10:13 11:1 61:13	224:7 290:24	22 265:4 312:12
44:8,21 47:1,6	215:23 218:14	66:1 69:13,16	2011 146:8	229 136:5
47:17 48:22	226:13 271:12	70:1 74:17 78:1	2012 21:5,11,12	22nd 258:22
49:7,9 157:17,19	274:23 277:9	78:2 93:17,20	21:19,24 298:17	23 313:10
1517 4:17 5:11	279:15 285:21	94:9,16 95:6,11	298:23 299:4	248N 82:4 87:3
	287:24 290:22	95:15,21 97:23	2012/2013 21:5	90:18 93:10
	299:23 306:7	97:24 98:2	2013 21:21,22	94:6 95:15,23
	312:12	104:23 107:1,1	27:17 41:5 45:3	96:18 98:4
		127:3,13,21	158:13 275:23	100:6 105:4
		128:15 132:2,2,3	2014 258:22	149:4
		142:19 146:16	2015 24:16,18	24th 27:6 41:4
			27:6,17 47:7	45:3 158:13
			53:3,6 65:22	25 269:5
			126:19 128:20	251-5250 3:9

257 223:9,11 293:13	291 111:15	304:16 305:1	136:19,20,23 137:1 213:12 277:17 281:13	79341 79:8
258 5:4	292 112:2,3 154:5 154:5	3600 3:7	5:20 321:10	<hr/> 8 <hr/>
264:14 223:24	293 153:18,19 154:6	37 123:15 308:24 310:11	50 150:15 239:2	8 99:15 213:16 226:12 292:16
26.54 45:3,8	296-8800 2:12	39 37:18,19	50/50 139:19	8/21/14 260:18
261 5:17	2S 72:5	3S 72:5	500 94:19 97:8 105:11 106:5	800 150:9
27 149:7 158:8	<hr/> 3 <hr/>	<hr/> 4 <hr/>	503 1:17	81497 189:5
27th 149:7	3 10:6 18:3 27:10 27:13,14 66:1	4 60:19 94:22 95:1 95:3 98:10,14	51 240:17,24	845 133:18,20
28 5:8	27:13,14 66:1	99:1,8,18 100:1	52 240:17,24 289:16	<hr/> 9 <hr/>
282-9119 2:5	69:13,16 70:1	104:8 137:6,8	53 240:24	9 101:3 136:21 146:13 147:1,20
285 111:5	84:16,16 94:2	150:15 191:6	546.57 158:13	238:11 241:2
286 111:8	96:3,7,18 97:1	198:12 294:21	59 4:17	253:4 260:20 272:20 274:19
287 111:9	97:13,17,19 98:2	4.25 147:10	<hr/> 6 <hr/>	303:24 319:21 320:1,9
289 111:12	104:19,19,22	4.25-inch 147:11	6 88:12 97:11,16 97:19 98:2	9:00 1:18 321:15 321:20
29 12:12 13:14,17 14:16,21 15:9,15	117:3 124:1	4.4 221:16	104:19,19 105:7	90 4:19
16:5 17:15,21	127:3,13,21	40 4:15 60:18 223:9 293:12	105:9,14,15,24	901 84:7,9 105:18 160:5,5,6 161:20
23:12 24:16	128:15 157:13	41 4:16 89:12	106:17,17,19	903 189:23 263:7
28:16 31:2	160:10 191:6	42 240:24	159:6,7 160:14	90th 305:8,10,14 305:20
52:19 56:17	204:5,7 275:10	42(h) 268:20	160:15 218:14	95 303:20,22
82:21 83:19	275:24 276:5,8	428 45:7,9	260:8 272:17	97 216:3
87:7 88:11	281:13 314:22	428N 101:9	295:21 296:7 298:20	
91:20 93:8	30 37:22 38:9 39:16 48:8	43 232:15,18,23	60 30:3 57:6	
94:16 95:21	122:17	44 233:19	60-day 30:5 57:6	
97:1 99:9 100:2	30.0 90:1	440 37:9 45:9	60091 2:4	
101:17 103:5	30.068 89:3,13 90:1	441 37:10,10 38:8 39:15	601 135:13,19 136:3,14	
105:10 116:12	302 154:21 219:2	45 221:10,16	60603 3:8	
162:1 197:14	305 154:17	454 45:10	62,000 253:12	
271:7,9,20	31 235:8	454.5 45:12	620 133:3,21 291:19 293:19	
273:22 274:16	3100 246:9	454.54 46:3	620.410 298:18	
275:2,7 276:3	3100-acre 245:17 246:6	456.57 41:4	626 259:22	
279:2,10 282:15	312 2:5 3:9	459 37:15,15	64 5:11	
287:7 289:21	313 113:6	460 37:15	6th 297:1,3,8	
294:7 297:7	318 113:6,6	471 46:8 48:1,18	<hr/> 7 <hr/>	
298:7 300:22	32 235:11 237:4	475 48:18	7 98:22 99:4 310:11	
303:23 304:5	33(c) 268:20	49 5:9,10	710 35:23	
305:23 312:14	339 117:12	<hr/> 5 <hr/>	74 4:5	
312:18 320:2	34 300:22	5 96:13 98:1		
29's 272:5	345 117:24	100:11,14 101:4		
29.889 100:17 101:1	35 147:5 219:2 298:17 304:13	101:9,16 102:22		
29.894 98:17		103:5 105:11		
29.916 96:10		106:10,16,17,19		
29.950 93:23				
290 111:15				