BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
	)	
Midwest Generation LLC	)	
(Powerton Station)	)	
	)	
V.	)	No. 21-109
	)	
Illinois Environmental	)	
Protection Agency	)	

REPORT OF THE PROCEEDINGS held in the above entitled cause before Hearing Officer Carol Webb, called by the Illinois Pollution Control Board, taken by Steven Brickey, CSR, RMR, CRR, for the State of Illinois, 111 South Capitol Street, Pekin, Illinois, on the 21st day of July, 2021, commencing at the hour of 9:23 a.m.

A P P E A R A N C E S

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MR. ANAND RAO, Technical Unit
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I N D E X

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HEARING OFFICER WEBB: Good morning. My name is Carol Webb and this is the hearing for PCB 21-109. Midwest Generation's Powerton Station seeking a variance from 35 Ill. Adm. Code Part 845.

Joining me today is Board member Cynthia Santos, the Board's chief scientist Anand Rao and senior attorney Tim Fox. It is July 21st and we are beginning at 9:30 a.m. There are no members of the public here to offer comment. Written public comment may be filed with the Board's clerk by July 28, 2021.

The Pollution Control Board members will make the final decision in this case. My purpose is to conduct the hearing in a neutral and orderly manner so that we have a clear record of the proceedings. This hearing was noticed pursuant to the act and the Board's rules and will be conducted pursuant to the Board's procedural rules at 35 Ill. Adm. Code 101 Subpart F and 104 Subpart B.

At this time, I will ask the parties to please make their appearances on the record.

MS. GALE: Kristen Gale and with me is Molly Snittjer on behalf of Midwest Generation, LLC.

HEARING OFFICER WEBB: Thank you.

MS. ZEIVEL: Christine Zeivel for Illinois EPA, also co-counsel Clayton Ankney.

HEARING OFFICER WEBB: Okay. Are there any preliminary matters to discuss on the record?

MS. GALE: Nothing for me.

HEARING OFFICER WEBB: Would the petitioner like to make an opening statement?

MS. GALE: I would. Thank you very much. Good morning, Madam Hearing Officer, members of the Board, Mr. Rao. I am, as I said, Kristen Gale and with me is Molly Snittjer and we are here on behalf of Midwest Generation on their petition for a brief extension of time on certain deadlines in the recently adopted Illinois coal combustion residual rule, also known as the CCR rule.

The extension is only for one of the surface impoundments at the Powerton station in Pekin, Illinois, the metal cleaning basin.

Specifically, Midwest Generation is requesting an extension of four deadlines; an extension of the deadline to complete the groundwater sampling and analysis under Section 845.650(b)(1)(a), an extension of the deadline to submit the operating permit application for the metal cleaning basin under Section 845.230(d)(1), an extension of the deadline to submit the category designation of the metal cleaning basin's closure prioritization, excuse me, under Section 845.700(g) and an extension of the deadline to submit the construction permit application under Section 845.700(h)(2).

We are here because the metal cleaning basin is not a federal CCR surface impoundment. It is not part of the ash sluice system. It does not receive ash mixed with liquid. Instead, the basin is either -- used to either hold dry ash or cleaning liquids, but not at the same time.

Generally, it holds nothing and sits empty. Because the metal cleaning basin is not a federal CCR surface impoundment, it does not have all the groundwater data, structural

information and background information that the other CCR surface impoundments at Powerton have by being a part of the federal program. It is important to note that Midwest Generation is not requesting a variance from any of the work or corrective actions required by the CCR rule.

Midwest Generation is working diligently to conduct all the work required under that rule. Instead, Midwest Generation is only asking for a brief extension of the immediate deadlines to accurately collect all the requisite information required for the extensive operating permit applications and the even more extensive construction permit applications. And by brief, I mean less than a year for each deadline.

The Agency does not object to Midwest Generation's request to extend the deadlines to collect and analyze the eight independent samples nor does it object to submitting the operating permit application and it does not object to submitting the category designation of the metal cleaning basin's closure prioritization.

The Agency did object to Midwest

Generation's request to extend the deadline to complete the initial emergency action plan and the fugitive dust plan. As Midwest Generation stated in its written response to the Agency's objection, it is withdrawing that request to extend those plans.

The Agency also objects to the extension to submit the construction permit application if it's determined that the metal cleaning basin is a Category 5 closure prioritization. Midwest Generation maintains that the construction permit application deadline truly within actually two months of completion of the operating permit application is an unreasonable hardship and that there is little harm to the environment or to the public to grant Midwest Generation a brief extension to submit that application and we will address those issues today.

There are also certain other misstatements of fact that were contained in the Agency's recommendation which Midwest Generation will address in this hearing today. While we do not believe that those misstatements are material

to the Board's decision to grant the requested variance, we believe it's important to correct the record.

Attached to Midwest Generation's petition were three affidavits by Sharene Shealey, Midwest Generation's environmental director; Dale Green, the Powerton station manager; and Richard Gnat of KPRG & Associates and a hydrologist.

Mr. Green and Mr. Gnat will be providing additional testimony in support of our petition and all three are available for questions from the Agency and the Board today. Thank you.

HEARING OFFICER WEBB: Thank you. Would the Agency like to make an opening statement?

MS. ZEIVEL: Sure. Just briefly. The Agency timely filed its recommendation fulfilling the regulatory requirements. We're here today relying on the written recommendation as provided. Our recommendation had two affidavits attached, one by Mr. Lynn Dunaway who is sitting here to my left, a geologist for the Illinois EPA, and then Mr. Darin LeCrone who is also here from the permit section, both within the

Bureau of Water.

We plan to rely on the affidavits as provided prior to hearing. Both of our witnesses are here and available to answer the pre-filed questions that the Board had and would also be available for cross-examination.

Otherwise, we do rely on the recommendation that requests denial of the construction permit application and we feel that that really is the primary issue today at the hearing.

HEARING OFFICER WEBB: Okay. Thank you. The petitioner may call their first witness.

MS. SNITTJER: Mr. Green.

HEARING OFFICER WEBB: The witness stand is right over at the end here.

MS. SNITTJER: We call Mr. Dale Green.

HEARING OFFICER WEBB: Okay. Would the court reporter please swear in the witness.

WHEREUPON:

DALE GREEN

called as a witness herein, having been first duly sworn, deposeth and saith as follows:

D I R E C T E X A M I N A T I O N

BY MS. SNITTJER:

Q. Okay. Good morning, Mr. Green. Can you please state your full name for the record.

A. Dale Green.

Q. And, Mr. Green, you're the station manager at Midwest Generation's Powerton station, correct?

A. That's correct.

Q. And the address of the Powerton station is 13082 East Manito Road in Pekin, correct?

A. That's correct.

MS. SNITTJER: And that answers the Board's Question 1.

BY MS. SNITTJER:

Q. Can you briefly describe your duties as station manager at Powerton?

A. Yeah, my primary duties are to oversee the maintenance and operations on a day-to-day basis to make sure we're available to produce electricity based on different market conditions.

Q. And how long have you been the

station manager at Powerton?

A. Since 2014.

Q. And were you employed there prior to 2014?

A. 2000.

Q. And you're familiar with the historical and current operations at the Powerton station, correct?

A. Yes.

Q. And you signed an affidavit verifying certain facts in Midwest Generation's variance petition, correct?

A. Yes.

Q. And have you reviewed this affidavit recently?

A. Yes.

Q. And are the facts stated in your affidavit true today?

A. Yes.

Q. Mr. Green, can you please describe the ash sluice system at Powerton?

A. Yes, the ash sluice system at Powerton basically consists of two separate operations, one for bottom ash and one for fly

ash. Bottom ash is sluice from the bottom of the boiler out to the dewatering bins where the decamp water or the water that was used to sluice it out there overflows and goes out to the ash surge basin.

The other process is the fly ash system, which fly ash then is collected in precipitators, drops out into hoppers, which is conveyed via vacuum to the ash -- the ash silo which is hauled offsite for beneficial use.

Q. So to confirm, the only basins that are part of the ash sluice system are the ash surge basin and the bypass basin, correct?

A. That is correct.

Q. And is the metal cleaning basin part of the ash sluice system?

A. It is not.

Q. What is the function of the metal cleaning basin?

A. The metal cleaning basin is used periodically, mostly annually once a year when we wash the boilers. When we wash the boilers, the water that is used to wash the boilers then goes out to the ash -- or the metal cleaning basin

where the water is processed.

We will put the system on recycle and add chemicals to drop out the precipitants and then once the water is clean enough for our NPDES permit, we then discharge that water to the ash surge basin and then periodically we do maintenance on our fly ash silo where we clean out the fly ash from the fly ash silo and we will place that material on the ramp going down to the metal cleaning basin and then later remove it offsite.

Q. So I want to break down those two functions a little bit more.

As to the boiler wash water, what is in boiler wash water or what is boiler wash water?

A. Boiler wash water is basically the bi-products of combustion. We wash the tubes off to increase heat transfer, that's the primary focus of why we do it, and the water then goes out into the metal cleaning basin where we process it per our NPDES permit water quality that are listed in that permit before we can discharge it.

Q. And has Midwest Generation ever

detected any fly ash in the boiler wash water?

A. To my understanding, we have not tested or have any tests where we have detected fly ash in the boiler wash water as bi-products of combustion.

MS. SNITTJER: And that responds to Board Question 5.

BY MS. SNITTJER:

Q. And approximately how much boiler wash water circulates in the metal cleaning basin during this boiler washing process?

A. We will put about a million gallons per day and typically it depends on how much we run. We will wash for three days to seven days.

Q. And you said this occurs annually, correct?

A. Annually, yes.

Q. And it wouldn't be accurate to say the water is stored there, rather it circulates, correct?

A. That's correct. We will circulate the water until the solids precipitate out and once that water meets our NPDES permit, the qualities specified in our NPDES permit, we will

discharge it to the ash surge basin and then the pond -- the metal cleaning basin is dewatered, what we call dewatered, and the material that's left there is left to dry. Once it is dried, we scoop it up with an end-loader and haul it offsite.

Q. To clarify again, this is regulated by your NPDES permit, correct?

A. Yes.

MR. RAO: May I ask a follow-up question?

MS. SNITTJER: Yes.

MR. RAO: Regarding Question 5, Mr. Green, you mentioned that fly ash was not detected in the processed water that was received in the metal cleaning basin?

THE WITNESS: Correct.

MR. RAO: Have you tested the water or is it just based on, you know --

THE WITNESS: We have not done any test on the metal cleaning basin water to determine whether there is fly ash involved in it or not.

MR. RAO: Okay. Thank you.

BY MS. SNITTJER:

Q. Would it be possible to test that boiler wash water for fly ash?

A. It's possible you could test it. You would have to test it when it's actually going out there versus after it's already cleaned up. So, yes, is it possible? Yes, it's possible.

Q. To go back to the --

MS. SNITTJER: We addressed how much boiler wash water circulates in the metal cleaning basin during this process, which answers Board Question 3 and 4.

BY MS. SNITTJER:

Q. Now, a couple of questions about the fly ash storage in the metal cleaning basin and just to be clear, these are two completely separate processes, correct?

A. Yes.

Q. So the metal cleaning basin is either holding boiler wash water or it is holding dry fly ash, but not -- those two are not commingled, correct?

A. That's correct.

Q. And how much fly ash is placed in

the basin during these maintenance events?

A. When we clean out our silo, it's roughly five truckload -- dump truckloads of fly ash that gets put in -- placed on the ramp going down into the basin.

MS. SNITTJER: And that responds to Board Question 3 and 4 as well.

MR. RAO: May I ask a follow up?

MS. SNITTJER: Yes.

MR. RAO: So you mentioned the processed water and fly ash is not commingled. So when you place fly ash in the metal cleaning basin, it will be completely dried or will it contain any remnants of the processed water?

THE WITNESS: No, it is completely dry. We basically place that material on the ramp going down into the bypass basin, not in the bypass basin itself.

MR. RAO: Thank you.

BY MS. SNITTJER:

Q. And so you said four to five truckloads, is that correct?

A. Roughly, yes.

Q. And to give some context, about how

much is that in relative to total facility operations?

A. It's probably less than a percent. It's a very, very small, de minimus amount.

Q. And how often is the metal cleaning basin used as this temporary lay down for the dry ash?

A. That probably takes place about four times a year, just depends on the maintenance activities of this particular silo that we clean out.

Q. And how long will it stay in the basin once you place it there?

A. It's not very long. Typically, what happens once we place it in the basin we're usually offline, so fly ash trucks are available, and the minute we place it there and get done with the cleaning activities, we schedule trucks then to load it and haul it offsite. So less than two weeks, three weeks max. Something like that.

Q. So other than this two to three weeks that the dry ash is in the basin and then the once per year that the boilers are washed, other than that, is the metal cleaning basin

empty?

A. Yes.

Q. And the metal cleaning basin is lined, correct?

A. Yes.

Q. And is the metal cleaning basin's liner the same as the ash surge basin and the bypass basin that are part of the ash sluice system?

A. Yes.

Q. Does Powerton station have a fugitive dust plan?

A. Yes.

Q. I'm handing you a copy of what will be marked as Hearing Exhibit 1.

MS. GALE: S.

MS. SNITTJER: S. Sorry. Hearing Exhibit S.

(Document marked as Petitioner's Exhibit No. S for identification.)

BY MS. SNITTJER:

Q. Is this a copy of Powerton's fugitive dust plan?

A. Yes.

Q. And was this fugitive dust plan developed and stored in the ordinary course of business?

A. Yes.

Q. And are you familiar with the contents of this fugitive dust plan?

A. Yes.

Q. And what is the fugitive dust plan?

A. The fugitive dust plan deals with anything on our property that could emit dust. So it looks at traffic on the roadways. It looks at our -- our fly ash backhouse, anything that could emit dust, and the purpose of this plan is to ensure that we do not allow fugitive dust to flow around the property.

As a matter of fact, if there is an issue where we have fugitive dust, we either shut the system down, we make sure that the process -- the fugitive dust does not exit our boundaries.

Q. And is the metal cleaning -- would any fugitive dust at the metal cleaning basin be managed according to this fugitive dust plan?

A. Yes, it is.

Q. And there is a separate fugitive dust plan at the Powerton station for managing dust from CCR surface impoundments, is that correct?

A. Yes.

Q. And is the metal cleaning basin covered by this separate CCR fugitive dust plan?

A. No.

Q. And why is that?

A. It's not -- well, it's not in that plan and for -- primarily as you don't get fugitive dust from that particular metal cleaning pond because it's mainly used as water. We do dump the -- place the ash on the ramp going into the metal cleaning.

If there is any fugitive dust from that, we follow this plan. We will wet it down. We'll stop the evolution where it was taking place with the placing the ash there. We will wet it down. Basically, it will permeate about three inches into that layer of ash and then we continue the evolution.

Q. And just to -- we'll get back to the

process, but just to go back, will the metal cleaning basin be incorporated into the separate CCR surface impoundment fugitive dust plan?

A. Yes. Yes.

Q. And are you aware that the deadline in the CCR rule to incorporate the metal cleaning basin into the CCR surface impoundment fugitive dust plan is October 31st, 2021?

A. Yes.

Q. And is Midwest Generation asking for an extension of the deadline to incorporate the metal cleaning basin into this separate fugitive dust plan?

A. No.

Q. And, in fact, that request was withdrawn from Midwest Generation's variance petition, correct?

A. Yes.

Q. So by October 31st, the metal cleaning basin will be subject to both of these fugitive dust plans, correct?

A. Yes.

Q. And you described -- can you describe again how Powerton currently manages dust

at the metal cleaning basin?

A. It's basically the way I described it. So if we're placing ash on the ramp that goes down to the metal cleaning basin, if that starts to emit some kind of fugitive dust, we stop the evolution, we stop the process, we will take water and we will wet that material down so it stops the fugitive dust from going anywhere and then we will continue, you know, placing ash there.

Q. And if fly ash is mixed with water, doesn't it become concrete?

A. Not if you use a small amount of water. So we use enough water that it permeates probably about three inches, maybe four inches of that top layer and it kind of develops a little bit of a crust to it once it dries, which stops the fugitive dust. But you would have to mix an enormous amount of water and let it sit for an extended period of time before it becomes so hard that it's like concrete.

Q. And is this process to manage dust at the metal cleaning basin, will this change or is it expected to change when the metal cleaning basin is incorporated into the CCR surface

impoundment fugitive dust plan?

A. No.

Q. Mr. Green, I'm going to hand you what is marked as Hearing Exhibit T.

MS. ZEIVEL: Should it be petitioners hearing exhibit?

MS. SNITTJER: Yes.

(Document marked as Petitioner's Exhibit No. T for identification.)

HEARING OFFICER WEBB: Do you want -- I know we discussed it off the record, but do you want to backtrack and mention on the record why you're starting with S and T?

MS. SNITTJER: Yes. Our response to the Agency's recommendation the last exhibit was Exhibit R. So we're starting the hearing with Exhibit S and this will be Exhibit T.

MS. GALE: So to back up, the petition had exhibits attached to it. We started at A and went A through Q and we added in our response -- we added another Exhibit R and to keep it simple instead of adding a number we're going to continue on with S.

HEARING OFFICER WEBB: Thank you.

BY MS. SNITTJER:

Q. Mr. Green, what is this document?

A. This document is the Illinois Ambient Air Monitoring 2022 Network Plan.

Q. And where did you locate this document?

A. This document was from the Agency's website.

Q. And have you reviewed this document?

A. Yes, I have.

Q. And according to this document, where is the closest air monitoring station to Powerton?

A. It's in Peoria on Jefferson Street.

Q. And this is a PM 2.5 monitor, correct?

A. Yes. According to the document, yes.

MS. SNITTJER: And that responds to Agency's Question 2, of the Board's Question 2. Sorry.

BY MS. SNITTJER:

Q. And can the Jefferson Street air

monitoring station detect fugitive dust from the Powerton property?

A. In my opinion, no. Because we do not let fugitive dust exit the property boundaries. We maintain it and keep it per our fugitive dust plan.

Q. And that's the purpose of the fugitive dust plan, correct?

A. Yes, it is.

Q. And for the metal cleaning basin, Midwest Generation intends to fully comply with all the technical requirements of the CCR rule, correct?

A. Yes.

Q. So the metal cleaning basin is expected to be closed or retrofitted according to the requirements of the Illinois CCR rule, correct?

A. Yes.

Q. So what is Midwest Generation asking for in this variance request?

A. Just more time.

MS. SNITTJER: Thank you. We'd like to move to enter the two exhibits S and T. Yes, S

and T into evidence.

HEARING OFFICER WEBB: No objection I'm assuming from the Agency?

MS. ZEIVEL: No objection.

HEARING OFFICER WEBB: Okay. S and T are admitted.

MS. SNITTJER: I have no further questions.

HEARING OFFICER WEBB: Okay. Wait. Mr. Rao, do you have any more questions?

MR. RAO: No.

HEARING OFFICER WEBB: Anything -- any follow-up from you?

MS. ZEIVEL: Just really briefly, Mr. Green.

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

BY MS. ZEIVEL:

Q. Can you expound on the size of the dump trucks, what maybe the tonnage is or are they single or double axel or what are we talking about? What are you referring to?

A. Once we haul it out, it's basically a semi-dump truck.

HEARING OFFICER WEBB: I apologize.

I should have also asked, are there any questions from --

MR. FOX: (Negative nod.)

HEARING OFFICER WEBB: Okay. Does the Agency have any more questions for this witness?

MS. ZEIVEL: No, that was it. Thank you.

HEARING OFFICER WEBB: Okay. Thank you, sir.

MS. GALE: Midwest Generation calls Mr. Richard Gnat.

HEARING OFFICER WEBB: Would the court reporter please swear in the witness.

WHEREUPON:

RICHARD GNAT

called as a witness herein, having been first duly sworn, deposeth and saith as follows:

D I R E C T E X A M I N A T I O N

BY MS. GALE:

Q. Mr. Gnat, can you please state your name for the record.

A. Richard Gnat, G-n-a-t.

Q. And who do you work for?

A. KPRG and Associates.

Q. What is your position there?

A. I'm a principal at KPRG and a hydrogeologist by profession.

Q. Can you just briefly describe what you do at KPRG?

A. Sure. I plan and direct most of the technical work for our office and our work primarily includes subsurface evaluations, soil and groundwater characterizations and remediation, which is our specialty.

Q. And about how long have you been doing that?

A. Since 1984.

Q. So a while. In this case, what -- what is KPR doing -- excuse me.

In this case, what is KPRG doing for Midwest Generation at the Powerton station generally?

A. We've done several environmental projects for them, but currently, and for the last several years, our primary work at Midwest Generation is associated with the groundwater monitoring for the CCR impoundments under the

federal rule and under the compliance commitment agreement.

Q. And, Mr. Gnat, you're familiar with the requirements in Illinois' CCR rule for the operating permit application and the construction permit applications?

A. Yes, I am.

Q. So tell me how are you familiar with those requirements.

A. I've been involved with Midwest Generation in looking at the proposed rules that were coming out and providing some input and some questions, comments and also provided testimony as part of the hearings.

Q. Okay. I want to talk about some of your other experience.

You've participated or assisted in preparing a groundwater model, correct?

A. Correct, yes. I'm not a groundwater model -- modeler, but -- it's a fairly specialized field, but I have been involved with them and directed them and helped put them together, yes.

Q. And I think you've already described this, but you have significant experience in

establishing groundwater monitoring programs, right?

A. Yes, I do.

Q. Tell me about your experience doing part of that -- isn't that statistical analysis? Tell me about that.

A. That is correct. I'm not a statistician by trade. However, I did have a number of statistics courses both in undergraduate and in graduate school, including statistics specifically for geoscience applications, and I've been involved with doing geostatistics on groundwater datasets from the early times of RCRA impoundments through some of the more current rules under the federal rules as well.

Q. And you signed an affidavit for Midwest Generation's petition for a variance for the metal cleaning basin, right?

A. Correct.

Q. And have you reviewed that -- excuse me. Have you reviewed that affidavit recently?

A. Yes, I have.

Q. And are the facts stated in your affidavit true today?

A. Yes, they are.

Q. Mr. Gnat, I want to turn to Board Question 1. We already mentioned the address, but the Board also asked about a couple other things. I'm missing one here, but I'm going to hand you what is Petitioner's Exhibit Q. I have a copy here as well.

MS. GALE: Mr. Rao, if you want to look at it.

MR. RAO: Thanks.

BY MS. GALE:

Q. What is Petitioner's Exhibit Q?

A. This is a letter from Midwest Generation to Mr. Alan Keller, Manager of Permit Section, Bureau of Water, Illinois EPA dated July 15, 2009.

(Document marked as Petitioner's Exhibit No. Q for identification.)

BY MS. GALE:

Q. Can you turn to -- I can't remember the figure number, the Powerton figure at the end.

A. Yes.

Q. What figure is that for the record,

please?

A. That is hard to tell on this figure.

Q. Does it have any sort of distinguishing title on it?

A. It says, "figure number" and then at the bottom of that figure where the figure number would be is not reproduced very well. So I can't say exactly what figure number that is.

Q. Does it say the Powerton station on it?

A. Yes, it does.

Q. Okay.

MS. GALE: Mr. Rao, are you able to find the figure?

MR. RAO: Is this the one?

THE WITNESS: Here you go.

MR. RAO: Got it.

MS. GALE: Okay.

BY MS. GALE:

Q. So these are -- excuse me. These are in answer to the second part of Board's Question 1.

Mr. Gnat, can you please describe the -- please describe the potable wells

around the station.

A. Sure. On this figure, what was done by Natural Resources Technologies, which is the permit that pulled this together, is -- is a radius of roughly 2,500 feet around where the impoundments are, which is the standard radius when looking for potable water wells in Illinois here and there are some yellow dots on this map, which -- which identify what those potable wells were. Several are outside of that radius and then there's -- there are one or two that are right basically at that 25-foot radius.

Q. And where are they located within that radius?

A. Okay. There is one that is located to the south of Manito Road. It's right at the 2,500-foot line and then there's one that is located just to the north -- I'm sorry -- to the west that's right by what looks like the substation, the ComEd substation, which is within the Powerton property.

Q. And the one to the south that's up-gradient, right?

A. Correct, groundwater flow does not

go to the south from this site.

Q. And those to the west, what's in between those wells and the metal cleaning basin?

A. There is an intake channel that runs through between all of the units. The CCR units are to the south and east of the state -- of that -- or, I'm sorry, to the east of that. I'm looking at the map wrong. To the east of the intake channel and then the particular --

Q. So --

A. -- wells at the far west side there.

Q. And so by having the intake channel in between, what does that mean in relation to the metal cleaning basin?

A. The part of the flow component that is to the west is in the very shallow groundwater that's within a more silty clay zone and it flows and it will be directly discharging to that intake channel, which then goes through the processing facility.

Q. So are those potable wells impacted by the metal cleaning basin or any of the other CCR surface impoundments?

A. No, I do not believe so. No.

Q. Okay. Mr. Gnat, what surface waters are near the Powerton station?

A. You've got the Illinois River to the north and then Powerton Lake to the west, northwest.

Q. Okay. And how, if at all, would those surface waters be impacted by the metal cleaning basin?

A. Well, Powerton Lake should not be impacted. It's on the other side, again, of that intake channel. Now, the groundwater flow within the lower unit there in that more sandy gravel unit is to the north and there's some diversity a little bit to the northeast, a little bit to the northwest, but it is flowing towards the Illinois River.

However, we do have three wells which are north of what's called the former ash basin wells 2, 3 and 4, which are the closest to the Illinois River and those generally do not have any exceedances of any of the values that we've looked at.

Q. And the Powerton -- excuse me. Powerton's NPDES permit discharges to the Powerton

Lake, correct?

A. Yes.

Q. So you mentioned the groundwater and you said it in some complexity, I think.

Can you please describe the groundwater conditions at Powerton because it's a bit complex?

A. Sure. There are really two units that we've identified. The first is a shallower unit that's -- it's really a discontinuance blend of a more silty -- silty clay material and that's really located within the area of where the metal cleaning basin is and then it moves to the east to just past the surge basin where it starts to pitch out and further to the east. That unit is no longer there.

So what we have found are the wells that are actually screened within first groundwater in that area, that first groundwater appears within that unit. Where that unit doesn't exist, groundwater appears a little bit deeper and it's within that sand and gravel unit. So when we look at the flow directions, we're looking at the wells that are screened within that shallower

silty clay unit and then separately the wells that are within that sand and gravel unit.

The two are hydraulically connected, but there is a clear difference on the water levels. So when we look at the silty clay unit, groundwater flow is consistently to the west right -- right to the intake channel there and when we look at the groundwater flow within that deeper sand and gravel unit it is in a northwesterly direction with some diversion going to -- a little bit to the northeast and a little bit to the northwest.

MS. GALE: Mr. Rao, those are the answers. Are you satisfied?

MR. RAO: Yes.

MS. GALE: Thank you.

BY MS. GALE:

Q. All right. Mr. Gnat, you and your firm are conducting many of the requirements under the federal CCR rule for Midwest Generation, isn't that correct?

A. Correct.

Q. Including your guys conducted the alternate source demonstration for the ash surge

basin and the bypass basin, right?

A. Correct.

Q. For the record, can you just briefly describe to us what the ultimate -- what an alternate source demonstration does?

A. Sure, an alternate source demonstration takes a look at -- from your monitoring round, if you've identified a potential statistically significant increase in your -- in the federal rule in your detection monitoring parameters, which are their Appendix 3 parameters and/or if you're in assessment monitoring, you know, relative to the Appendix 4 parameters in that case you're calculating groundwater protection standards and if you have an exceedance around a sampling you go out and do a resample.

If you -- if that resample suggests that -- it verifies your exceedance, you get kicked into either doing an alternate source demonstration or to move into a corrective measures study. The alternate source demonstration basically is the next technical step to really look at those exceedances and try and make an evaluation do they really reflect the

release from the unit or is there something else potentially occurring or in the area that may be associated with that exceedance and not a release from the unit.

Q. And for the Exhibit R that was attached to Midwest Generation's response was the 2019 alternate source demonstration, you actually signed that, correct?

A. Correct.

Q. To your recollection, what was the conclusion of that alternate source demonstration for the ash surge basin, the bypass basin?

A. The conclusion was -- there were several parameters that were in question if I remember correctly that those exceedances weren't associated with the release from the impoundment, but rather in alternate source in the area and that I believe the recommendation was to continue with the assessment monitoring in which the program was in at the time.

Q. Great. Thank you. I want to turn to the operating permit application. You and your firm are also conducting the groundwater monitoring for Midwest Generation at its stations

under the new Illinois CCR rule, correct?

A. Correct.

Q. Okay. And that now includes the metal cleaning basin, is that right?

A. That is correct, yes.

Q. In fact, you or someone at your firm arranged for the additional groundwater monitoring wells to be installed around the metal cleaning basin, right?

A. Correct.

Q. So, Mr. Gnat, what did Midwest Generation have to do to install those wells?

A. Sure. So in order to get into compliance with what the new rule is requiring for a groundwater monitoring network, specifically for the metals cleaning basin, we needed to add two additional down-gradient wells and those would be along that western perimeter.

Well, there was no road along that western perimeter to access that area. So we had to consider putting a road in so a driller can access and put in the wells and subsequently field crews to sample.

Q. And, Mr. Gnat, when you guys were

considering installing that road, were there any concerns about it?

A. Sure. I mean, that -- that west backend of the metals cleaning basin is the berm for the metals cleaning basin and my first question to Midwest Generation was to make sure that -- or issue an item to address -- I didn't want to have anything done in modifying that berm, in this case putting in a roadway, that might potentially impact the special integrity of that berm itself.

KPRG does not have any structural engineers on staff. We don't do structural work. So I requested Midwest Generation to contact who they use for their structural evaluations to make sure that when we have that road done that we're not going to breach that integrity.

Q. So before that road could even be put in, there had to be another engineering structural evaluation to make sure that road could be structurally sound?

A. Correct.

Q. Okay. And then so after that all

occurred, when did the wells get installed?

A. I believe we put them in in March.

Q. And at that time in March, did that include dedicated pumps?

A. No, it did not.

Q. Why not?

A. Dedicated pumps you have to know what the geometry of your well is, how deep the well is and so on and you provide that information to the manufacturer. We use QED and that manufacturer actually cuts and develops your sampling system specifically for that well.

So once we put the wells in, then we right away once we know where the screens are set and so on, we pass that information to QED. Usually, we get the pumps pretty quick. In this case right now, there's a lot of issues with materials and supplies and so on. It took a little bit longer than normal to get those pumps.

Q. So what did you have to do instead?

A. Well, the initial concern for me was -- I was to try and make sure that Midwest Generation stays in compliance with the federal -- with the state rule that was coming up. Knowing

that we have eight rounds of groundwater data that needs to be collected and we need to have that collected at that time within 180 days of the rule, you know, the intent of that sampling is to develop a background and a representative background and ideally it should, you know, include a seasonal variation.
One-hundred-and-eighty days in the Midwest does not include a seasonal variation.

But -- so even -- even with that concern, we needed to start sampling right away. So I had the crew do the initial round of sampling with a bailer while we were waiting for the pumps so that at least we started getting rounds of samples and I -- I brought that up and I -- in fact, I believe I put that into my affidavit specifically so that people reading it and the Agency would know that we did that because the change in methodology from a bailer sampling to a dedicated bladder pump sampling could affect those results, especially if you're looking at it from a statistics standpoint and I believe the Agency agreed with that.

And assuming that we can get the

eight rounds of representative rounds without that bailer sampling, we're certainly not going to use that in aid of our calculations.

Q. Right. So if we get this extension, we won't -- the Agency is going to -- already said they're objecting to using the bailer sample, correct?

A. Yes.

Q. We only that -- you only did that at the time because of the time constraints and you wanted to collect something just in case, right?

A. Correct.

Q. And you have no intention upon using that sample now particularly if we get the extension, right?

A. That is correct, yes.

Q. Are there dedicated pumps installed now?

A. Yes, there are.

Q. And so you and your firm are preparing the operating permit applications for the Midwest Gen stations, correct?

A. Correct.

Q. And that's five stations total,

right?

A. Correct.

Q. And for all the five stations, there are a total of nine federal CCR surface impoundments, right?

A. Correct.

Q. You can do the math in your head. About how many people at KPRG are working on the operating permit application?

A. Right now we have five working on them right now and then as we have other people kick in on, you know, if we can compartmentalize something that the main five people need we can carve that off and have other people input into it as well.

Q. And I mean this kindly. KPRG is not a big operation, right?

A. No, we're not.

Q. So five is a pretty significant chunk of your group, right?

A. Twenty-five percent.

Q. So let's talk about those operating permit applications. Generally, what sort of

information is involved to submit to the Agency?

A. In the operating permits, you have to have a detailed discussion and presentation of the history of each unit, when it came online, if there were any changes in liner construction over time, what was placed into the impoundment over time and any information then on the chemistry of what was placed in the impoundment over time.

That's a lot of information that you need to do a series of interviews or whatnot with plant personnel going through all the historical documentation to try and get as complete of a record as you can on that because that does feed in then to a number of other things within that operating permit and one of which is trying to get the chemical characteristics of what were in those ponds and certainly, you know, something that was placed in there 10, 15 years ago, we really can't sample that.

It's no longer being placed there and/or if it was different it may not be represented with what is in there now, but certainly from the hearing and the subsequent answers to questions and I believe conference

calls that we've had with Illinois EPA our understanding, too, is now for the existing ash that's in the impoundments we have to sample that ash and analyze those samples for the full list of the parameters identified in Part 845.600.

And we use that as well, you know, as this is representative of what is in there currently right now and with having that full list of parameters. I think that does provide a lot of good information. So that whole sampling program as well. As well then you also need to include a very detailed hydrogeologic characterization of the site, which sets up the basic conceptual model and then development of the groundwater sampling programs and statistical evaluation programs and so on and at the end of the day it's to also include what your proposed groundwater protection standards are going to be for each constituent for that unit.

Q. And also you have to do location restriction demonstrations, right?

A. Correct. Location -- yes.

Q. And a preliminary closure plan, right?

A. A preliminary closure and postclosure plan are also included as part of the operating permit, yes.

Q. So even for the federal CCR surface impoundments that have -- already have a bunch of this information, approximately how many hours will it take to prepare one operating permit application?

A. One operating permit application we're estimating in the order of 600 hours.

Q. Okay. So for a CCR surface impoundment that is not a federal pond and does not have all this background information, approximately how many hours would it take to complete all that work?

A. It will be certainly more than 600 hours. Perhaps 800 hours or so.

Q. So I think you said the collection of groundwater data, you know, the operating permit must have at least eight rounds of groundwater data, correct?

A. Correct.

Q. And following the collection of the groundwater data, what do you do with those eight

rounds?

A. Once you get your eight rounds of data, you have to do a statistical evaluation of that data and that's the first step in developing your groundwater protection standards. So we use a computer program called Sanitas to assist with our statistical evaluations.

The first thing you need to do is take all of the analytical data as it's coming in and so on. You have to convert those files we get from the lab. We need to convert them to flat files and put them into the program and really the first step is running a series of quick evaluations, some quick runs and just to make sure that the program is recognizing all the data that's being put into it.

If you're looking at eight wells, it's not picking up seven -- you know, seven points of data, it's picking up all eight points of data, you know, and so on and if something is missing, then you have to go back in and figure out which data line is not -- is it not picking up, what is wrong with -- you know, and the flat file needs to be corrected and once you

get an understanding, okay, the program is picking everything up that we have in our database here that we fed into it, then you start the actual statistical evaluation process.

Q. Okay. And the statistical evaluation process, I mean, how many parameters in this case, an Illinois CCR rule, will you be looking at?

A. We have 22 parameters that we have to look at per well.

Q. Per well. Okay. And then can --

MS. GALE: So this is answer to Question 8A of the Board's question.

BY MS. GALE:

Q. Can the statistical analysis be done before the eight rounds of data are collected?

A. No, it can't. You need a full round of -- at the minimum and -- and the requirement is a round of eight -- eight rounds of samples and to start any type of statistical calculation short of that doesn't fulfill the purpose or the need or the requirement for that statistical evaluation and one additional round can affect those calculations and reverberate all the way through.

Absolutely.

Q. Right. Because you're doing -- you're evaluating each well for each parameter. What -- can you describe a little bit what that means when you do that for each parameter, what you -- at each well?

A. So let's just take for calculating the up-gradient background statistic. The first thing we look at is whether or not the distributions are normal or not normal and so that's one whole set of calculations, but we usually -- whenever possible we try and have -- unless it's one very small focused unit, we usually try and have at least two up-gradient wells identified within any program and the purpose for that is, yeah, we've got eight rounds of data that are required, but for background statistics the more data you have the better.

So we usually try to have more than one up-gradient point and that way we look at each up-gradient point separately, but then we look at them together for each parameter.

So say Wells 1 and 2 are up-gradient wells and we're looking at boron and

boron in Well 1 behaves -- it's a normal distribution, normal distribution in Well 2. Then we combine the two datasets for boron and we compare them actually, not combine them, but compare them and if there is no statistically significant variation between those two datasets we can pull the two and now use a background dataset of 16 points rather than eight points, a much better statistical assessment and in some cases you'll find that there is some spatial variation between the two up-gradient points and you can't combine them. So then you have to decide out of those two points which one am I going to use for my background calculation and we usually will err on the conservative side.

Q. Great.

MR. RAO: May I ask a follow-up?

MS. GALE: Please.

MR. RAO: I think when we asked Question 8A it was not about doing the statistical evaluation. We are under the impression what the Agency was saying when you submit the operating permit you need to identify what procedures you're going to use to evaluate the data.

So the question was, do you know what procedures you're able to use before you collect the data or do you need to collect the data and then decide what statistical procedures you're going to apply?

MS. GALE: You anticipated my next question.

MR. RAO: I'm sorry.

MS. GALE: That's okay.

THE WITNESS: Sure. Actually to put a little bit -- to be a little bit on a parallel track. Until you have all of your background data, you don't know exactly the statistical method you're going to use.

However, we are developing as part of the permit application and also as part of the federal rule we developed a statistical approach. This is how we're going to look at the data and make our decisions as to which statistical approaches we may or may not use and so we've got that plan, which -- which kind of gives this is the guide of how we're going to approach the study and then once you get the data you use the guide and determine which path you're

going to go down through statistically to do your evaluations for that particular well or parameter and it goes down to parameter as well.

MR. RAO: So there can be changes after you collect the data --

THE WITNESS: Correct.

MR. RAO: -- and what you decide every year?

THE WITNESS: Correct.

MS. GALE: So I guess I'll ask it a different way. The data really informs the ultimate choice, correct?

THE WITNESS: Yes.

MR. RAO: Thank you.

MS. GALE: No problem. Is that good?

MR. RAO: Yes.

MS. GALE: I think that was 8B.

BY MS. GALE:

Q. Mr. Gnat, I wanted -- to your recollection, we were discussing this yesterday, but it's been 24 hours.

At the metal cleaning basin, there are two wells there, Monitoring Well 14 and

Monitoring Well 15. Monitoring Well 15 I believe you said is part of the federal CCR permit program, correct?

A. Correct, that's a down-gradient well for the ash surge basin.

Q. But Monitoring Well 14, what is that?

A. Monitoring Well 14 was installed on the northwest side of the metals cleaning basin as part of a permit requirement and as part of the initial hydrogeologic evaluation that was conducted I believe in 2011 by Patrick Engineering and that is included in the compliance commitment agreement, CCA monitoring, for the Powerton station.

Q. Are those wells sampled similarly?

A. Well 14 is under the CCA. That's for dissolved metals and the federal rule, even 15 has dissolved metals, too. It's part of the CCA program, I believe, but the federal rule CCR sampling is for total metals just like for the Illinois CCR rule. It's not filtered in the field.

Q. So today could you use the well data

from 14 to even start a statistical analysis?

A. No. Even though the dissolved -- or the dissolved metals and the total metals from various previous hearings and so on, it was determined that those numbers are pretty close, but they're not the same and not the same is critical in statistical evaluations.

Q. I want to go back to your discussion about the statistical analysis. You said it's all done with a computer program called Sanitas, but, I mean, is it -- do you just sit and run it or is there some human element to it, too?

A. Sure. There's a lot of times, especially everything nowadays, it's computerized. So everything will be quick. You can do it fast, but there is that whole human component that people tend to forget about and when you're looking at a lot of statistical -- you know, large datasets, a lot of statistical evaluations, we're doing 22 parameters per well and then comparing up-gradient and down-gradient there are a lot of -- you can't just take the output and say, okay, this is the value.

You have to take a look at that

output and make sure, again, is it picking everything up that it needs to? Does that result make any sense from everything that you know about that site?

And, you know, so you're going through all these and it's a step process. First, you do the -- you evaluate the type of distribution, you evaluate is there any seasonality. Are there any outliers? Each one of these is a separate set of calculations.

And then that finally ultimately feeds -- once you get into that saying, okay, I'm going to be doing the evaluation using this method and calculating a prediction limit for the -- for the up-gradient values and then comparing the down-gradient to it, you know, quite honestly having done this a number of times after a while your eyes go cross eyed and you start losing the forest from the trees and it is absolutely critical that at some point whoever is doing these evaluations you have to walk away from it for two or three days and then come back and take a look with a fresh set of eyes and make sure that you're coming to the same conclusion. And so it is a

time-intensive process. Even though you're using computers, we're figuring for a standard dataset for something like the metals cleaning basin, that's a four to six-week process.

Q. Okay. All right. So then once you have that background established and you've done the statistical analysis, let's pretend or let's hypothetical that you find in the next groundwater sample an elevated concentration of one of the 845.600 parameters, what do you do then?

A. Once the groundwater protection standard is established?

Q. Correct.

A. So in general, at least the way the federal rule ran, once you calculate a groundwater protection standard or a prediction limit in the case of their detection parameters in Appendix 3, it's that next set of quarterly data that you sample is then compared against the values that you have calculated.

So once that's collected and if you see that there is an exceedance, you do an immediate resample, immediate as you can. We should try to get out there within two weeks or so

of seeing an exceedance and then if that resample comes back still above standard, it basically varies the initial value, then you have -- you choose to either -- you can go through the alternate source demonstration process which we talked about a little bit or move to corrective measures study.

Q. And, to your recollection, under the Illinois CCR rule, how long do you have for an alternate source demonstration?

A. Under -- under the Illinois rule is 60 days to do the alternate source demonstration and then Illinois EPA has 30 days to review it and either agree or disagree with it.

Q. So in this case, Midwest Generation is asking for until end of January to do the groundwater assessment and statistical analysis, then there's another round of sampling in May probably?

A. At the end of -- well, our usual rounds are going to be -- we try not to sample in January, just too cold although last February was subzero. So we usually try and sample on a quarterly sampling will be in February and May,

kind of the middle of the quarter timeframe. So February, May, August.

Q. So doing that calculation, when would the alternate source demonstration be done?

A. If -- if we -- now, let's also understand here so at the end of -- of January we will have our statistical evaluations done and our proposed groundwater protection standards under Illinois EPA's rule. That gets fed in as part of the operating permit.

Now, recognize those are still proposed. Those haven't been reviewed by IEPA. They haven't agreed or disagreed with them. So if we do the next quarter of sampling, let's say it's in February, we get our data back by mid-March or so, then, you know, we're starting to get our data back towards the beginning of March, the data generally takes 30 to 45 days to get that and so that's where you get your first indication on a comparison back against what we're proposing is that's still not -- it hasn't been approved yet.

Q. So the alternate source demonstration would be done you said in March, probably mid-May, right?

A. Correct. So let's say that by the end of March we -- we have -- or mid-March then we go out and we do a resample to verify. So by mid-April, say we've got an idea, mid-April to end of April we've got an idea whether or not we have a potential exceedance here.

Again, on a proposed number and that would start the clock. So let's -- if we use end of April, we've got May and June 60 days to do the alternate source demonstration if that's what is decided to do.

Q. So not until probably end of June would we actually know whether the metal cleaning basin was causing contamination, correct?

A. Correct, IEPA has 30 days to review that. Yeah.

Q. You're right. That's true. So in your opinion, is there enough information available today to know whether the metal cleaning basin is a Category 5 or a Category 7?

A. From, in my opinion, I don't think there is -- the dataset is not complete yet and so with any reasonable accuracy, I would hesitate to make that guess because that's really what it

comes down to. Guess or educated guess, it's still a guess and if we can wait a little bit longer and not do a guess, I think that's the preferable alternative.

Q. Okay. Great. I'm going to turn -- yeah, I'm going to turn to the construction permit applications.

You're also assisting in preparing the construction permit applications for Midwest Generation, isn't that correct?

A. Correct.

Q. And Midwest Generation has how many Category 3 surface impoundments?

A. Five.

Q. And so when are those due? Is it five? Hang on. Four.

A. Four.

Q. Four. Yeah.

A. I believe those are due --

Q. February 1st, 2022?

A. -- February 1st. That's when they're due. I'm back calculating when they have to be done in order to meet all the public notice and public meeting requirements.

Q. Okay.

A. So you have to subtract 60 days off of that.

Q. Right. And why is that?

A. Because in accordance with the state rule, you have to have a 30-day notification period. You have to post your draft plan, 30-day notification period and then within 30 days of submittal, you have to have your public meeting.

Q. Over 30 days actually, right?

A. Correct.

Q. And under the Illinois CCR rule, Category 5 have to submit their applications by August 1st to the Agency, August 1st, 2022, correct?

A. Yes.

Q. And I think we just discussed the rule requirements, when does the application really need to be completed by?

A. If it's August 1st, again to meet what you need for the public involvement is subtract 60 days off that. So basically June 1st, June 2nd timeframe is when the draft has to be submitted.

Q. And to make it a meaningful public involvement, the draft must be relatively complete, correct?

A. Sure.

Q. So by submitting an operating permit application for the metal cleaning basin on March 31st, 2022, in your experience, would you expect the Illinois EPA -- back up.

And the operating permit application will include the proposed background quality data and the proposed groundwater protection standards and the statistical analysis, in your expectation, would the Agency have approved the proposed information before June 2nd, 2022?

A. I can't speak on the Agency's behalf, but considering the number of applications coming in, they've got a large task.

Q. Okay. So what is -- so assuming that to be true, assuming they have a lot going on, what does that mean for preparing a construction permit application for the metal cleaning basin by June 2nd, 2022?

A. Even from the timeframe we're

talking about, if we go through and do an alternate source demonstration and so, the results of which will affect what is going to be in the construction permit application absolutely.

So even if we get our part of the alternate source demonstration, of an alternate source demonstration if that's the path it would go down done by the end of April, even without the Agency review on it, that gives us one month, May, to complete and finalize a draft of a construction permit application that we feel is sufficient to put in front of the public, which is an important thing and that document has to be pretty darn close.

Q. And that document is -- it would include proposed background data in the groundwater protection standards, correct?

A. Correct.

Q. But they would not be approved, right?

A. Unless we got approval already --

Q. Right.

A. -- prior to that.

Q. Say we get approval in two months.

So it could happen.

A. And the other question is perhaps the Agency will not agree with the way we've calculated something. What does that do?

Q. Well, what does that do? If the Agency rejects what we do and we've already put in our proposed construction permit, what happens?

A. It reverberates through the whole process.

Q. So we probably have to do a second submittal, right?

A. Correct.

Q. Mr. Gnat, this is -- I can actually hand you the rule if you want to read from it, but, to your recollection, what is included in a construction permit application?

A. Sure. Just, in general, there's a lot of information that is similar to what is required in the operating permit so that it can be a standalone document, but then it also includes some additional items, like the structural stability analysis requirements.

It will include the -- requires groundwater -- a numerical groundwater model to be

established and the development of alternate engineering evaluations for alternate closure options and that feeds into what the final proposed closure is and then obviously the more detailed closure plan and postclosure plan.

Q. So we talked -- you said you have experience with groundwater modeling. Of course you're not a groundwater modeler, but from your experience what is involved in preparing a groundwater model?

A. Sure. The modeling that is required here by the Agency is a three-dimension numerical model. We are working with a groundwater modeling expert. This is all she does. And so, you know, basically it starts out with kind of a feedback back and forth on the hydrogeologic characterization that we're preparing as part of the operating permit, which is establishing the basics for topography of the site and layers and so on which is then used as -- by the groundwater modeler to -- to develop a three-dimensional numerical representation that's topography and then they take all of the water level data, precipitation data from the area, any information

on gate station data from the rivers in the area and so on and develop a groundwater flow model and the first thing is to see -- is to calibrate it so that the groundwater flow model is replicating the current groundwater flow conditions that we're seeing at the site.

So once that model is calibrated and it's replicating the flow conditions, then they start preparing the attachment, the contaminant transport attachment to that model, be it a MT3D or whichever one they're going to choose and that basically starts defining what's going to be the chemistry of the source that we're going to be using, where is the source going to be placed and so on and all that is prepped to get ready for when the alternatives engineering evaluations are done for closure alternatives or corrective measures alternatives.

So that then they can overlay those -- the handful that are selected as the most -- the best alternatives for that site and they start overlaying that on the model and then providing the predictions of over -- you know, long-term how is this going to improve groundwater

quality for that particular option and that's all then -- the results of that modeling then is fed back into determining which is going to be the preferred alternative for either corrective measures or closure.

Q. So this modeling, approximately how long does it take to create a pretty good model?

A. Yeah, so for these sites and, you know, the modeling world these aren't huge sites, but one of them is, but, you know, generally to develop the base model and get it ready for doing the engineering evaluation overlays you're looking somewhere probably in the order of 400, 400 plus hours per site.

Q. Per site?

A. Mm-hmm.

Q. Okay. Then I think you mentioned it.

So that -- this feeds into a closure alternatives analysis, is that what you mean?

A. The closure -- yeah, it's all hand in hand and I believe that's one of the intents of IEPA including this requirement is it allows you

to take your alternatives evaluations, which include evaluation of long-term and short-term benefits and, you know, a lot of times if you're not doing a numerical model, the long-term benefits are -- they're calculated, you know, using some analytical solutions.

I believe that the Agency has this requirement so that you have a little bit of a better evaluation and a more stringent evaluation of that long-term analysis and so you take those engineering -- each engineering option and you overlay it on the model and basically the model predicts how is this engineering change going to affect in five years, in ten years, in 20 years, in 50 years the groundwater quality and so each option has to be evaluated separately and then within each option you may have -- you know, let's tweak it a little bit and so on. So each one of those runs probably takes two or three days.

Q. And the alternatives closure analysis, what does that involve to create one of those?

A. That starts out with looking at all

possible alternatives out there, but you usually try and get down to four or five options, three to five options, so on, which are probably the most -- make the most sense from an engineering standpoint and feasibility technical constructability standpoint, but then you also need to take a look at within each option, you know, you've got -- one of the options that has to be looked at is complete excavation of the material.

But they're various scenarios under that. Complete excavation using trucks. You know, can we bring a rail line in? Can we do barges? So each one of those you have to evaluate different transportation components to it. How can you remove the ash? What is the best way to remove the ash?

If it's a small impoundment, sure, you just use a shovel. If it's a large impoundment, you might have to start looking at other, you know, hydraulic dredging alternatives or some other clamshell type things. So there's lots of -- within individual alternatives, there are lots of little technical aspects that also

need to be considered.

Q. And also does it require -- what kind of engineering does that design require?

A. Well, in order to -- to really maximize what I believe the purpose of the numerical modeling is is to assist in these long-term eval-- short-term/long-term risk evaluations, you really have to -- it can't just be, oh, we want to throw, you know, a cap here and maybe put a couple of extraction wells here or something like that.

It has to be a little more well thought because otherwise you're putting garbage into the model and you're going to get garbage out. So our experience is you have to take each option and maybe do up to about a 30 percent design, really kind of think it through and then feed that into the model. Anything short of that you're going through the exercise, you're not truly using it for what it's intended to be.

Q. Right. So the real purpose of a closure alternatives analysis, you really need to think about what you need to do to make it a meaningful analysis, right?

A. Correct.

Q. So how long does that take?

A. That's not a quick process. That's easily, you know, four to six weeks, eight weeks to really think it through and rough out those, you know, three or four or five options that you really want to take a good look at.

Q. And that has to go in the construction permit application, correct?

A. Correct.

Q. Finally, doesn't the closure plan have to go into the construction permit application?

A. Correct.

Q. And what is a closure plan?

A. A closure plan is taking the one that you selected if you're doing this for a corrective measures evaluation, intending to do a corrective measures, what that preferred alternative is or if you're looking at it for actual closure of the pond, what's going to be the preferred closure alternative and then you add additional engineering detail to that above and beyond your 30 percent. It obviously doesn't have

to be a one-hundred percent design on the construction application, but certainly --

Q. A decent plan?

A. A decent plan, correct.

Q. And you can't draft the closure plan before the alternatives analysis, right?

A. Correct.

Q. All right. Because otherwise you just -- otherwise, you're just making up an analysis for no good reason?

A. Correct.

Q. So it's a -- it's a -- I don't know if I'm using this word correctly. Forgive me for those that know.

It's an iterative process, right, the groundwater modeling feeds into the alternatives analysis which determines what the closure plan is, isn't that correct?

A. That is correct.

Q. Okay. And guesstimating, do you have an estimate of how many hours it would take to prepare an actual, good, closure plan?

A. Considering you've already got, say, up to about a 30 percent design on that, to then

once you identify what you believe you want to be in your closure plan, to take that next step that's probably going to be another three or four weeks of time to get enough additional detail into that for it to be presentable in the plan.

Q. And all of this depends -- you know, is really assuming that nothing goes wrong, isn't that correct?

A. That's correct.

Q. Including having a pandemic, right?

A. Correct.

Q. Okay. I want to turn to -- and, of course, Mr. Gnat, while you're using this time to conduct all of this work for the construction permit applications, you're working on other requirements under the Illinois CCR rule, correct?

A. Correct.

Q. So I want to turn to the Board Question 6 and for clarity I'll just read it.

In response to Agency's recommendation that the Board deny the requested extension of the deadline to file the construction permit, Midwest Gen states "No harm will be caused by granting Midwest Gen the same time other

Category 5 CCR surface impoundments are granted to prepare a complete and accurate construction permit application." Citing Midwest Gen response at 2.

The Board asks "Please clarify whether causation of harm, quote, unquote, in the above statement refers to any adverse environmental impact due to the extension of the deadline to submit the construction permit application by four months."

So, Mr. Gnat, I'll ask you to please answer that question, what -- whether causation of harm refers to any adverse impact, do you think there will be harm and what harm will be involved?

A. When I think -- when I read that question or saw that question, you know, first thing I think is there any imminent threat to human health and the environment that would cause if we extended this deadline and quite honestly these impoundments are on property, controlled access, they're no receptors down-gradient. I do not see any imminent threat to human health or the environment if we have an extension to a deadline

here. We're not asking for a huge amount of time.

Q. Then B, EPA's recommendation indicates an exceedance of -- excuse me.

EPA's recommendation indicates exceedances of Class 1 groundwater quality standards for sulfate and TDS in certain monitoring wells at the facility. Recommendation at 14.

Please comment on the implications of extending the deadline for submitting a construction permit application on mitigating potential groundwater impacts. And, I believe, Mr. Gnat, you looked at those wells that the Agency referred to and what is your opinion about that?

A. Well, I believe there were two specific parameters that were identified.

Q. TDS and sulfate?

A. TDS and sulfate by Illinois EPA. So Well 15 that is a down-gradient well for the ash surge basin, but it's also an up-gradient well for the metals cleaning basin. In that it's part of the ash surge basin, we do have total metals data, the federal rule Appendix 3, Appendix 4, which is

the same as 845.600.

So we do have those data. Well 14 doesn't have that data. We're just starting to develop that background dataset for Well 14. So if you want to compare a totals dataset to a dissolved dataset, you can't do that statistically with any fairness. It's not going to be representative statistically, but even taking a look at it the distributions that we're seeing and what we're seeing in down-gradient Well 14 there are some exceedances of the Class 1 standard, but they're also exceedances in the up-gradient well.

So the question is the groundwater protection standard is going to end up being the higher of either the statistical background, which would be calculated off of Well 15 or the Class 1 drinking water standard. And just quickly looking at the numbers that -- that we have available, I don't think a determination can be made where we're going to end up with that.

Especially considering the two ones that were suggested, the sulfate and total dissolved solids, I believe those are not health-based standards. Those are secondary

drinking water standards that affect palpability, smell of the water, whatnot. It's not a health-based standard and we have no down-gradient receptors. So, again, I don't see the harm of requesting the extension at this point.

MS. GALE: Does that answer your question?

MR. RAO: Yes.

MS. GALE: Thank you. Mr. Gnat, I believe that's the end of my questions for you. There is -- Question 7 it calls for a legal conclusion. So I intended upon answering it myself after Mr. Gnat was finished. And then I have a couple other cleanups that I was going to do, but he's ready for cross-examination if there's any.

MS. ZEIVEL: Just a few questions, Mr. Gnat.

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

BY MS. ZEIVEL:

Q. This is the first alternate source demonstration I've personally reviewed. I've talked about it in rulemakings, but I haven't seen one myself. I see that you utilized the LEAF

test --

A. Correct.

Q. -- to gather composite samples it seemed like throughout the basin.

Can you clarify how deep those samples were or at what depth those samples were taken as part of that test?

A. Sure. It's been a while ago. I believe the way we usually approach it is divide the basin into quadrants or sections and then within each section take one or two areas where we dig down a foot or two and take that sample and then we start compositing into one sample.

We try to do it across the basin from where the water comes in versus where the discharge on the basin is just for -- you're going to have some higher coarse fractions where it first comes in and more fines at the back end. So we're trying to get a representative sample across the basin.

Q. So is that one or two feet down from the surface --

A. Correct.

Q. -- of the water?

A. Yes.

Q. So are any samples as part of this leachate collection sampling method, are any samples taken deeper in the impoundment?

A. No, we did not for these studies. No.

Q. And CCR surface impoundments where the CCR material tends to accumulate at the bottom of the basin as sediments or other material, would the concentrations of CCR -- the parameters associated with CCR material tend to be higher at the bottom of the basin versus the top of the basin?

A. That's -- that's a good question. I -- I would not think -- these -- these basins don't store ash for extended periods of time. I believe every one or two years they're cleaned out and fresh ash comes in.

The method that's generating the ash is staying the same. It's still the same boiler systems or burning systems. The source of the ash is the same and so on. So the ash -- the fresh ash that is at the top should be similar to what the ash is at the bottom of the -- of the

impoundment. I do not see from a totals analysis that you're going to see much difference and that totals is what you're really leaching out in the LEAF test.

So I do not -- I don't have data that shows different, but I would not anticipate that I would see much difference. It's the same ash that's sitting at the top as is in the bottom.

Q. So is that kind of intermittent usage or location of CCR within the basins, that's true of all the CCR surface impoundments, including the ash surge basin where there isn't CCR in the material or in the basin very often?

A. That's -- that's a very long -- you know, my understanding is that these basins are cleaned out on a fairly regular basis and fresh ash is introduced. So it's not -- my understanding it's not sitting there five or ten years.

Q. So are the samples taken for the LEAF test, are those samples taken while there's CCR in the basin just prior to dredging or just following a dredging? I mean, do you choose the time at which you take these LEAF method samples

to ensure that you're getting the -- most likely to get CCR material or results from those samples you've completed?

A. The timing of that sample is really kind of regulatory-driven. We're addressing a potential increase in groundwater concentration above a standard calculated comparison value. So, you know, the reason we went out there and collected it was as part of an alternate source demonstration which was triggered by groundwater events.

So it wasn't planned, you know, hey, next time you guys are dredging a thing we're going to come out and collect some samples. This was very much regulatory-driven and we had a timeframe and in the federal rule we have 90 days to do the ASD and under the state rule we're going to have 60 days.

Q. I understand. So you're saying you take the sample based on the timelines and deadlines you have to meet regardless of where Midwest Generation might be in its storage -- temporary or not storage of the material?

A. Correct.

Q. Would you generally note that in your alternate source demonstration, you know, whether there's CCR material in the impoundment at the time or at what point in the cycle just for, you know, informational purposes is that included as part of any of your evaluation?

A. No, it's not and, you know, again, I guess I would go back if I collect a CCR sample at the time A it's the same process that's generating the ash and the ash is being placed in this impoundment.

I'm not -- and I'm collecting a representative sample from across trying to get the coarse fraction and the fine fraction and the stuff in between. That -- that ash from time A and time B should be the same -- same ash, same chemistry.

Q. By same ash, you mean produced as a result of the same process, but not necessarily the same physical ash?

A. Correct. It's the same source that they're getting the coal from that they're burning, the same process of burning the coal generating the ash, the same process of getting

the ash into that impoundment.

Q. Was this alternate source demonstration that was attached to Midwest Gen's response, was that submitted to the U.S. EPA as part of the Federal 257 Program?

A. I believe it's posted and it's included as part of the annual report, but the federal program is self-implementing. So it's not something that you formally submit, I don't believe, to U.S. EPA. It's posted up and it's included as part of the annual report.

Q. So as far as you're aware, there is no review and approval of these alternate source demonstrations by U.S. EPA under the 257 program?

A. Correct.

Q. And I think Ms. Gale said she was going to talk about the Board question regarding redesignation of an impoundment for categories later on, but I have -- I'm just curious if you have any information or insight to share about whether in terms of since you are the one that is helping complete these and prepare these applications, if Midwest Gen were to choose a Category 5 just conservatively, not based on any

hard data evidence stating there are exceedances, but to be conservative and choose Category 5 and start along that schedule and then later data were to show, no, based on statistics and background there are no exceedances, what kind of hardship would that cause your team or Midwest Generation to be on a shorter timeline and then end up having -- getting additional time by somehow redesignating?

A. The shorter time, you know, you're correct. We would have to start the process so that if, in fact, the state would stay that Category 5, that we're meeting all the deadlines, but I think part of that designation, too, determines as to what -- how those alternative evaluations are going to be done, what the final conclusions of those are going to be, how are you going to overlay them into -- there's a lot of reverberation that happens when you start with -- let's assume we've got to go through an entire corrective measures and start proceeding down that path and then halfway through, oh, no, we really don't need to.

I mean, that does reverberate

and the document you're doing you may have been doing some work that you aren't necessarily going to need to complete at this time. Now, is that -- you know, could that work that was done be used sometimes perhaps in the future? Perhaps. I don't know. But I'm sure there's going to be some -- some wheel spinning that occurs that doesn't necessarily need to occur.

Q. Thank you. I was not attempting to call for speculation, but I did want to know what those reverberations are because I believe you would probably understand that better than most here. So I appreciate your testimony.

I believe you said that Midwest Generation has four Category 3 CCR surface impoundments and a Category 3 -- Category's 1, 2, 3 and 4 all have construction permit application due dates of February 1st.

I believe you testified, and please correct me if I'm wrong, your understanding and the Agency's understanding is that you need 60 days ahead of that timeline to fulfill the public notice requirements, do you know when the initial operating permit applications are due for

inactive, existing -- inactive and existing CCR surface impoundments?

A. I believe those are due October, end of October.

Q. Regardless of what category you are?

A. Correct.

Q. So do your -- does Midwest Generation's four Category 3 surface impoundments, it sounds to me from your testimony, would have one month from the time their operating permit application is completed until the applicable notice requirements -- a draft construction permit application would have to be completed for purposes of complying with the public notice requirements?

A. Correct.

Q. Has -- to your knowledge, has Midwest Generation sought variances for any of those Category 3 impoundments for which February 1 construction permit applications are due?

A. Not to my knowledge.

MS. ZEIVEL: That's all the questions I have at this time.

HEARING OFFICER WEBB: Do you want

to do --

R E D I R E C T E X A M I N A T I O N

BY MS. GALE:

Q. Back on that question. Those four units that are Category 3, they're federal CCR surface impoundments, aren't they?

A. They are.

Q. So they have background information from I think we started in 2016, isn't that right?

A. That's correct.

Q. And we have all the infor- -- you know, we have groundwater data, correct?

A. Yes.

Q. We have sampling data from the impoundments, correct?

A. Correct.

Q. We have a lot of the historical documentation all collected from all of those impoundments, isn't that correct?

A. Correct.

Q. We don't have that information for the metal cleaning basin, do we?

A. No, we don't.

Q. And I believe she asked you about

the harm and I said I would be answering No. 7, but I want to go back to that. You kind of said it.

But if it was labeled as a Category 5 now even with incomplete data and we have new data that changes, wouldn't we be duplicating some of the work later? Like, we have something change, wouldn't we have to change some of the information we put in, right, inputs would change, correct?

A. Sure. I mean, if you're taking a guess on an incomplete dataset and that guess changes because the dataset comes in and changes it, you're -- I mean, it's triggering -- if you make a decision, it's triggering certain things.

So if then that changes, it may have, you know, a different consequence of what you're looking at or what you're evaluating how you're going to look at it.

Q. And we have -- now, we have an incomplete dataset.

So we can't feed that into our groundwater model yet, correct?

A. Correct.

Q. And since we can't feed it into our groundwater model yet, we can't start an alternatives analysis yet?

A. Those -- the alternatives evaluation needs that dataset or those calculations to be completed to be able to complete your engineering evaluation. So there are certain things that you can do ahead of time, but in order for it to be completed you need to wait for that and then once that gets completed and in the meantime you've done all the modeling stuff that you can do to cue up the model to be ready to receive the engineering input, so it's kind of one builds on top of the other.

So as you put all your pieces in place, if you decide that one of the pieces you put in place is in the wrong place because you took a guess, they move that and then that reverberates across the Board.

Q. Right. And by comparison, the Category 3 ponds, which are federal CCR surface impoundments, we have that data already, right?

A. That's correct.

Q. So we can start working on that

information now, correct?

A. That's right.

Q. It's not just one month, we have a few months. You're working on it presently, aren't you?

A. Correct.

MS. GALE: That's it.

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

BY MS. ZEIVEL:

Q. For all these impoundments -- impoundments that Midwest Generation considers federal impoundments under 257, have you categorized those other impoundments at the Powerton station?

A. We were involved in some of that work, yes.

Q. To your knowledge, have those been submitted to the Agency?

MS. GALE: Yes.

BY THE WITNESS:

A. Yes.

BY MS. ZEIVEL:

Q. Just one moment.

HEARING OFFICER WEBB: Sure.

BY MS. ZEIVEL:

Q. You testified earlier about -- you testified earlier about your statistical approach that in certain instances rather than before choosing a method necessarily you can choose a statistical approach or procedures that you will follow, is that something, if required, that could be included?

Do you ever include those statistical approaches or descriptions of those approaches in permit applications? I mean, is that part of the overall description of how you are going to move forward with your statistical analysis?

A. Yes, that -- we will have an appendix to the application, which will be our proposed statistical evaluation approach similar to what we've developed already for the federal rule.

There are some tweaks that need to be done to that to meet the state requirements and that basically spells out, you know, this is going to be our overall approach on how we're going to do it, but then once you get the data

then you decide within that plan, you know, which avenue you're going to go down, but that is certainly a requirement I believe of the Illinois operating permit as well and that will be included, yes.

Q. Okay. So my understanding is that in your mind there is a difference between the statistical procedures or approach that you will utilize as then the statistic method that's actually chosen that you will end up utilizing?

A. Correct. So the plan basically identifies, you know, different aspects. So if all of a sudden you're looking at a dataset which is greater than 50, 60 percent non-detects, there's a different way you're going to have to look at it statistically then if you've got 30 percent non-detects or if you have no non-detects.

If your distribution that you look at is -- is not a normal distribution and then you look at all the potential underlying distributions as to log normal distribution, if none of those are normal, what are you going to do? It's going to have to be analyzed as a non-parametric. So what -- how are you going to

look at it then?

So that plan kind of has all the kind of what-if scenarios and provides the path for that and then you don't know which of that path you're going to take until you actually get the dataset. Once you look at your dataset, you can say, "Okay. Within my plan, this is what I'm proposing to do."

And if you come up with something that's going to be completed out of the ordinary, then we're going to have to have some discussions. There has to be some -- I mean, if there's truly something quirky in the data and some very rigorous analysis of variance needs to be done, you need to have a real statistical expert to do a truly meaningful analysis of variance. I'm certainly not qualified to do that.

So there's lots of aspects that can happen. That hasn't happened to date yet for something like that, but the plan will identify, you know, kind of the avenues that you believe you want to have available for yourself and when the data comes in then you decide which road you're going down.

Q. The Agency's recommendation stated and the Board had, I think, restated it in its questions, but, you know, the Agency's interpretation of the operating permit requirements being a proposed groundwater monitoring system if we were to go with that train of thought it is a proposed groundwater monitoring system what I'm hearing is that it seems the statistical procedures or approach that you will utilize as part of a proposed groundwater monitoring system that those things would go hand in hand in proposing your overall monitoring system and how you're going to conduct your analysis.

A. Mm-hmm.

Q. Do you agree that a proposed groundwater monitoring system with a corresponding proposed statistical approach or analysis would be an appropriate thing to include in an initial operating permit application?

A. I believe that is what's required, correct, yes.

Q. Thank you.

MS. GALE: But -- I'm sorry.

MS. ZEIVEL: I just have, I think, one more line of questioning before we move on.

BY MS. ZEIVEL:

Q. Are water levels, groundwater levels or surface water levels, needed for a model in order to conduct the necessary modeling of the monitoring wells?

A. Yes, the groundwater model that is being developed is -- the modeler has access to all of our groundwater level elevations and, you know, any gate stations from the area for the rivers and so on, yes.

Q. Can a transport model be calibrated to dissolved analyses?

A. Sure, it can be calibrated to dissolved analyses. It depends on what your inputs are, but it certainly can be calibrated to dissolved analyses.

MS. ZEIVEL: That's all for me. Thank you.

F U R T H E R E X A M I N A T I O N

BY MS. GALE:

Q. I just want to clarify her final question about a proposed statistical method and

you said "I believe that's what the rule requires."

When you're saying it's proposed, it's being proposed to the Agency, right?

A. Correct.

Q. What has to be, though, in that method, that proposed statistical method?

A. The rule provides the guidance that needs to meet the unified guidance and the requirements in the rule which, I believe, parallel the federal rule for statistical evaluations, specific criteria that need to be met.

So, you know, what we basically have, and my understanding is in what we're going to be providing is a proposed groundwater monitoring network, a proposed statistical approach, and based on that proposed statistical approach we're going to be doing our calculations for the eight background samples and develop the background statistic and then also the -- based on that in comparison to the standards in our 845.600 the proposed groundwater protection standard and

that's all part of the permit here. This is what we're proposing, the method, this, that.

Now, upon the review of the Agency, it could well be the IEPA may say, yeah, we agree with this, this sounds good and we agree with the standards the way they were calculated. They could also come back and say, you know what, we think you need another monitoring well here and we don't agree with that. So you need to change up the statistical calculation. I mean, that can occur as well and that's part of the review process for the permit.

Q. But the rule requires, and I'm looking at 640(f)(3) the statistical method chosen, doesn't it?

A. Right. And so when we -- what we'll have -- this is kind of the plan we're using for our approach and when we present the calculated -- the groundwater protection standards we will have -- say to get to our background statistic this is what we used.

Q. And to do that, you needed the groundwater monitoring results, right?

A. Correct.

MS. GALE: Thank you. I have nothing further.

HEARING OFFICER WEBB: Okay.

MS. ZEIVEL: None from the Agency.

MS. GALE: I'm sorry. What did you say?

MS. ZEIVEL: I said nothing from the Agency right now.

HEARING OFFICER WEBB: All right. Thank you, sir.

MS. GALE: Thank you.

HEARING OFFICER WEBB: Does petitioner have anything more to present?

MS. GALE: Yes, I have a few more answers to the -- excuse me -- to the Board's questions. I have -- in answer to 8C, I have the testimony which will be Petitioner's Hearing Exhibit U that they requested. You guys have this, right?

(Document marked as Petitioner's Exhibit No. U for identification.)

MS. ZEIVEL: Yes.

MS. GALE: And then for the record

what that is is the Illinois EPA's filed answers that were filed in the CCR rulemaking on August 3, 2022. That was a pretty extensive answer. So I only did an excerpt. It's the cover page and then Page 157.

THE COURT REPORTER: Did you say 2022?

MS. GALE: I did say that. I meant 2020. August 8th, 2020. And then I also have answer to Board Question 7. And I was planning on reading it into the record, but I won't waste our time or Steve's fingers. And I apologize for being on my phone, but we didn't have a printer yesterday.

So in response to the Board's questions, Midwest Generation contends that while the rule may allow Midwest Gen to redesignate the metal cleaning basin as a Category 7 if new data supports that it is unreasonable to require Midwest Gen to make a designation of Category 5 before we have any CCR groundwater data.

A designation of Category 5 now would have significant adverse effect on Midwest Gen without any benefit to the environment and

would not hasten the closure or retrofitting of the metal cleaning basin.

As we heard Mr. Gnat testify, Midwest Generation is currently preparing five operating permit applications for nine CCR surface impoundments for submittal by October 31, 2021. At the same time, Midwest Generation is also preparing construction permit applications for four surface impoundments that are Category 3 which means they're in EJ areas, excuse me, environmental justice areas so that they're ready at the latest by December 1, 2021.

We heard from Mr. Gnat that preparing these construction permit applications is a large endeavor and has a domino effect. I mean, the fact that this exercise builds upon itself. You first have to develop the groundwater data, including establishing the background data and the groundwater protection standards.

Based upon that, you create the groundwater model which relies upon that data and you then also have to conduct an alternatives closures analysis which includes an evaluation of best closure method and that valuation is based in

part upon the groundwater monitoring data and the modeling which demonstrates what closure analysis would be best to get to the groundwater protection standards as soon as possible.

Finally, you have to prepare a closure plan and a postclosure plan, which depends upon the results of the alternatives analysis which depends upon the modeling. If the metal cleaning basin is designated as a Category 5 now, before we have that information Midwest Gen will have to begin working on the construction permit application now with incomplete information, meaning Midwest Generation will likely create data and information that will have to be revised later and one change, as Mr. Gnat said, one change in the groundwater evaluation will affect the model, which affects the alternatives source analysis and can ultimately affect the closure plan.

Ultimately, Midwest Gen could be doing work that did not need to be done and could duplicate work later on. All -- again, getting to really what we're asking for here, Midwest Generation is asking for relief -- is not asking for any relief from any technical requirements or

any technical evaluations as Midwest Generation is already working at 110 percent to comply with the various requirements of the CCR rule for all of its CCR surface impoundments.

All we're asking for here is a little more time and Midwest Gen contends the better way is to allow the data to be developed so it can submit an accurate category designation. That's our answer to No. 7.

HEARING OFFICER WEBB: Are you going to file that as part of your post-hearing brief or what do you want?

MS. GALE: Why don't -- we'll just put that as, I guess, an attachment. I haven't printed it up here. We can just attach it to the post-hearing brief.

HEARING OFFICER WEBB: Okay. Because it was argument.

MS. GALE: It was argument. That's part of the reason why I didn't really want a witness to testify to it.

HEARING OFFICER WEBB: Okay.

MS. GALE: And we can include all that in the post-hearing brief. I also wanted to

make sure that we move all of the exhibits that were attached to the petition and attached to the response into evidence. I don't think there's any objection, but I just want to make that for the record.

MS. ZEIVEL: There's no objection. I don't know that we need to do that.

HEARING OFFICER WEBB: I'll dot the i's and cross the t's. They're part of the record, but I guess they're not technically admitted as -- you know, into evidence as hearing exhibits, but, yeah, we can do that.

MS. GALE: I like t's crossed and i's dotted.

HEARING OFFICER WEBB: Okay.

MS. GALE: And, in part, because -- and I didn't think this was right, the Agency did all their background on their -- on their affidavits.

HEARING OFFICER WEBB: Okay. So Exhibit -- Exhibits A through --

MS. GALE: R.

HEARING OFFICER WEBB: -- R are admitted, okay, and as well as today we did S, T

and I don't think I officially admitted Exhibit U.

MS. GALE: Yes, I move for Exhibit U.

MS. ZEIVEL: Can we make sure to clarify those as petitioner's hearing exhibits because the Agency also used letters.

HEARING OFFICER WEBB: Okay. Thank you.

MS. ZEIVEL: So --

HEARING OFFICER WEBB: Okay.

MS. GALE: Sorry.

HEARING OFFICER WEBB: Do you have anything more that you would like to present today?

MS. GALE: No.

HEARING OFFICER WEBB: Okay. Would you like to take a five-minute recess?

MS. ZEIVEL: Yes, please.

MS. GALE: Yes.

HEARING OFFICER WEBB: Let's do that. We're off the record.

(Whereupon, a break was taken after which the following proceedings were had.)

HEARING OFFICER WEBB: All right. Let's go back on the record and we will pick up with the Agency's first witness.

MS. ZEIVEL: Yes, the Agency calls Darin LeCrone.

HEARING OFFICER WEBB: Okay. Would the court reporter please swear in the witness.

WHEREUPON:

DARIN LECRONE

called as a witness herein, having been first duly sworn, deposeth and saith as follow:

D I R E C T E X A M I N A T I O N

BY MS. ZEIVEL:

Q. Mr. LeCrone, can you state your name for the record and spell your last name, please.

A. It's Darin LeCrone, L-e-C-r-o-n-e.

Q. And can you state your employer and your position?

A. Yeah, I'm currently the permit section manager for the Illinois EPA Division of Water Pollution Control. During the rulemaking, I was the industrial unit manager for the Agency also.

Q. Congratulations on your promotion.

A. Thank you.

Q. Did you sign an affidavit that was filed with the Agency's recommendation?

A. I did, yes.

Q. Have you recently reviewed that affidavit?

A. I did.

Q. To your knowledge, is the facts attested to in that affidavit still true today?

A. To the best of my knowledge, yes.

MS. ZEIVEL: The Agency doesn't have any new testimony for this witness, but offers Mr. LeCrone to answer any questions that Midwest Generation or the Board may have for him.

HEARING OFFICER WEBB: Okay. Ms. Gale, do you have any questions for this witness?

MS. GALE: I just have a few questions, just a few questions. It's just about the permit applications.

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

BY MS. GALE:

Q. Congratulations on your promotion --

A. Thank you.

Q. -- to manager. So, to clarify, you'll be managing the permit review and issuance or disapproval of the operating and construction permits for the Illinois CCR rule?

A. Yeah, I will be the one signing the final permits, yeah, and my staff will be responsible along with the groundwater section staff. It will be kind of a joint effort.

Q. Sure.

A. But the permits will all be signed by me.

Q. And the operating permit applications for the permits are due on October 31st, 2021, correct?

A. Correct.

Q. And I believe, but to confirm, you're expecting one application for an entire station for an operating permit application?

A. That would be preferable. Does it necessarily have to be done that way? It could -- you know, it's kind of up to each site owner whether they want to include one application for all their impoundments or depending on -- on their preference at least for the initial operating

permit they could file separate applications. I would prefer one, but I don't believe there's anything in the rule that states it has to be one way or the other.

Q. Okay. I want to hand you Petitioner's Exhibit V.

(Document marked as Petitioner's Exhibit No. V for identification.)

BY MS. GALE:

Q. So the Agency -- this is a list that the Agency prepared during the Illinois -- the rulemaking and was filed on August 3, 2020, correct? It's a list of CCR surface impoundments.

A. Yes.

Q. And I don't have the cover letter here -- the cover page, but it is actually -- would be a part of Petitioner's Exhibit U. I just kept it separate for simplicity reasons.

It was part of the Illinois EPA's answers to questions during the rulemaking, right?

A. I believe it was, yes.

Q. And this has -- this is a list of

all of the CCR -- excuse me -- CCR surface impoundments the Agency has identified, correct?

A. That's my understanding, correct.

Q. Okay. So -- and you have it broken down by station thereabouts. I mean, it's kind of bolded, but you can kind of see where each station is bolded and where the surface impoundments are identified within each station, right?

A. Correct.

Q. So let's assume for simplicity sake that each station submits one application -- one operating permit application.

You would expect approximately 20 applications to come in October 31st?

A. Yes.

Q. And assuming that they're doing one application for their entire unit, many of the applications will include multiple CCR surface impoundments, correct?

A. Correct.

Q. And as we heard from Mr. Gnat, each of these applications was going to include numerous technical reports and information, right?

A. Correct.

Q. In fact, which we discussed significantly, the groundwater monitoring program, correct, which establishes the background quality for each CCR surface impoundment?

A. Yes, that was part of it and it will be -- there will be a lot of information in each application, yeah.

Q. And the Agency is going to thoroughly review each application, correct?

A. To the best of our abilities, correct.

Q. And that will take some time, won't you agree?

A. It will, yes.

Q. And actually it can also involve some follow-up with the applicants for, like, additional questions, right?

A. Most -- most applications do. They're generally questions, follow-up clarification that we need. We're usually in communication with applicants during the process.

Q. Sure. And in the Illinois rule, Illinois CCR rule, excuse me, there's no deadline for the Agency to grant or deny an application?

A. No.

Q. I'm sorry. I didn't hear you.

A. No, I don't believe so.

Q. Thank you. Similarly, the construction permit application for the CCR surface impoundments for Category's 1, 2, 3 and 4 are due on February 1st, 2022, correct?

A. I believe that's correct.

Q. I can get out the rule, but I think we're all right here.

A. Yes, I think so.

Q. Just going off of Petitioner's Exhibit X on Column I there's about -- which Column I is the area of EJ concern, there's about at least eight applications that will be Category 3, could you agree with that?

A. That looks like that's probably correct, yes.

Q. So on February 1st, 2022, you'll get at least eight construction permit applications presumably?

A. It appears so, yes.

Q. You could get more, though?

A. We could get more.

Q. Right. And these applications will contain even more information, isn't that correct?

A. That is correct.

Q. They will have the model, which will be significant, right?

A. Yes.

Q. And a pretty robust closure plan, right?

A. Correct.

Q. And a pretty robust alternatives closure analysis, right?

A. Correct.

Q. And, similarly, the Agency will thoroughly review each of these applications, right?

A. Yes.

Q. And there's no deadline for the Agency to issue or --

A. Correct.

Q. -- deny a construction --

A. The --

Q. -- permit application?

A. Deadlines are on submittal of the applications, not on final decisions.

Q. Great.

MS. GALE: I move to admit Petitioner's Exhibit V and I have no further questions of this witness.

HEARING OFFICER WEBB: This was an Agency-created list, you said?

MS. GALE: This was an Agency-created list attached to -- it was actually attached to Illinois EPA's pre-filed answers that they filed on August 3rd, 2020.

HEARING OFFICER WEBB: Thank you. Exhibit V is admitted. Nothing else?

MS. GALE: Nothing further.

HEARING OFFICER WEBB: Anything?

MS. ZEIVEL: Nothing from the Agency.

HEARING OFFICER WEBB: Mr. Rao, anything from the Board? Thank you, sir.

THE WITNESS: What do I do with that?

MS. GALE: Frame it.

THE WITNESS: Frame it.

MS. GALE: Or I can take it back.

HEARING OFFICER WEBB: Ms. Zeivel,

you may call your next witness.

MS. ZEIVEL: The Agency calls Lynn Dunaway.

HEARING OFFICER WEBB: Would the court reporter please swear in the witness.

WHEREUPON:

LYNN DUNAWAY

called as a witness herein, having been first duly sworn, deposeth and saith as follows:

D I R E C T E X A M I N A T I O N

BY MS. ZEIVEL:

Q. Mr. Dunaway, can you state your name and spell your last name for the record, please.

A. My name is Lynn Dunaway, D-u-n-a-w-a-y.

Q. Can you state your employer and your position?

A. I work for the Illinois Environmental Protection Agency. I'm an Environmental Protection Specialist IV in the Bureau of Water Groundwater Section.

Q. How long have you been with the groundwater section?

A. A little over 33 years.

Q. There's been a lot of conversation about the operating permit application and the groundwater monitoring system that needs to be provided as part of that application, as well as implications for that to the construction permit applications, the Agency's recommendation has put forth its interpretation of the operating permit application requirements and I'm just going to very briefly read those provisions at issue.

Section 845.230(d)(i) and we're talking about little 3 and little 4. Little 4 states that the initial operating permit application must include a proposed groundwater monitoring program that includes a minimum of eight independent samples for each background and down-gradient well.

And little 3 says that the operating permit application must include a groundwater sampling and analysis program that includes selection of the statistical procedures to be used for evaluating groundwater monitoring data.

The Agency's recommendation has stated that it is the Agency's interpretation that

the initial operating permit application must include a proposed groundwater monitoring program. We've heard -- we've seen in Midwest Gen's petition and in testimony argument that without a background established this operating permit application cannot be complete.

Can you just give an explanation to us and the Board as to what you would envision seeing as part of this initial operating permit application for impoundments such as the metal cleaning basin where they were not previously thought to be a 257 impoundment where this background groundwater quality data has not yet existed or been established?

A. It's the Agency's position that the initial operating permit could -- would be a proposed monitoring system and would lay out, you know, the sampling schedule to establish background and it would include as part of that the statistical procedures that are compliant with 640 -- 845.640, specifically Subsection G, which lays out the requirements that any acceptable statistical method has to meet in order to be used.

Q. So this initial operating permit application does not necessarily have to choose the statistical method that will ultimately be utilized?

A. It doesn't have to contain the specific method, only the procedures that are compliant with 845.

Q. So if an initial operating permit application did not include a chosen method, at what point would the Agency see this or review it if not in this initial operating permit application?

A. There's a requirement that owners and operators submit quarterly sampling and it does require the statistical analysis of that sampling round. If they have collected their background by that time, it could come in under a quarterly sampling.

There's a requirement for an annual sample or an annual report. It could be included in the annual report. It could also -- depending on the timing, it could become part of a subsequent operating permit.

Q. So if a statistical method is not

chosen or background is not established at the time of the initial operating permit application, you would certainly expect that it would be done and included in a renewal application for the next operating permit application round?

A. Certainly by then, yes.

MS. ZEIVEL: That's all the questions I have. Otherwise, Mr. Dunaway is here and available for follow-up by Midwest Generation and the Board.

HEARING OFFICER WEBB: Okay. Ms. Gale?

MS. GALE: Yes.

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

BY MS. GALE:

Q. Yes. Mr. Dunaway, I don't think you have it in front of you.

I'm looking at -- do you have an extra rule? I guess I can read --

A. I can get mine.

Q. Yeah, why don't you get yours. I want you to turn to 640(f) entitled Statistical Method. If you turn to 640(f), let's look at 640(f)(3). I'm going to read to you from the

rule. "The owner or operator of the CCR surface impoundment must submit the following to the Agency in an operating permit application: Documentation of the statistical method chosen." Does it say that there?

A. Yes.

MS. GALE: I have nothing further.

HEARING OFFICER WEBB: Mr. Rao?

MR. RAO: No.

HEARING OFFICER WEBB: Anybody else anything further? Okay. All right. Thank you, sir.

Ms. Zeivel, do you have anything else you would like to present today?

MS. ZEIVEL: Well, I assume to cross the t's and dot the i's we should motion to include our recommendation exhibits as the Agency's hearing exhibits. Our foundations were all established in the affidavits of our witnesses.

MS. GALE: No objection.

HEARING OFFICER WEBB: No objection. Can you please remind me what letters -- or -- A through --

MS. ZEIVEL: A through L.
HEARING OFFICER WEBB: Okay.
MS. ZEIVEL: L as in Larry.
HEARING OFFICER WEBB: And those were attached to what? I'm sorry.
MS. ZEIVEL: The Agency's recommendation.
HEARING OFFICER WEBB: Great. Anything else?
MS. ZEIVEL: Will we have closing statements or brief arguments?
HEARING OFFICER WEBB: Yes.
MS. ZEIVEL: Then I have no other evidence to present.
HEARING OFFICER WEBB: We will move onto closing arguments.
Ms. Gale, would you like to make a closing argument?
MS. GALE: Sure. I haven't prepared one, but I can do it. I think it's pretty simple. Midwest Generation -- we've said it a few times. We're not asking for any alternative requirements for technical evaluations or technical analysis or any corrective alternatives to the corrective

actions required under the rule or closure or retrofit.

All we're asking for is a very brief extension for these pretty short deadlines and if you recall from the CCR rulemaking, the Agency acknowledged the time for the deadlines were short, but we are now working to work within those deadlines, there's a lot of work to be done in them and for this one pond we're just asking for a brief extension for the operating permit application, to conduct the groundwater sampling analysis, to establish a category designation and to submit the construction permit application should we find that it has groundwater -- potentially causes groundwater contamination. Of course if we find it does not, then we're not asking for an extension of that deadline.

HEARING OFFICER WEBB: Would the Agency like to make a closing argument?

MS. ZEIVEL: Yes. I would just like to reiterate the Agency's position that we do not support nor necessarily object to three of the primary requests for Midwest Generation. The extension to the 180 days to complete sampling

while we think the 180-day requirement that we advocated -- the Agency advocated for during the rulemaking proceeding is -- was and is reasonable and on par with the requirements of 257 for new impoundments due to the logistical issues and necessary for Midwest Generation to complete that sampling, it does -- the Agency does believe that it points to a need for additional time.

Establishment of quality background is critical to ensure a protection of groundwater resources. Because of that, despite the Agency's interpretation of the operating permit application requirements, which we emphasized a bit today at the hearing, it is still vitally important that an operating permit application be as complete and accurate as possible.

The Agency believes that that accuracy can be obtained and a complete application can be submitted prior to background being established. However, we do also support a fuller, more robust application and so when it came to supporting or denying that extension we really felt that we provided the technical pros

and cons to Midwest Gen's request in fulfilling our recommendation requirements, but that ultimately whether Midwest Generation has met their burden in terms of hardship compared to environmental harm, that that was an ultimate determination for the Board to make.

When it comes to the category designation, the Agency was more reticent to neither support nor object to that extension. However, ultimately in the scheme of things, it will not -- when Midwest Gen submits their category designation doesn't ultimately impact when closure would start or the actual closure timeline.

So for that reason, while we think a conservative choice could be made in the scheme of getting these impoundments, you know, under permit and closed, we didn't feel that it weighed against granting that extension and for those reasons the Agency chose in its recommendation not to support nor object to those requirements.

As for the construction permit application, the Agency's objection to that

extension remains. For the reasons set forth in the recommendation, we feel that the construction permit application is more likely to impact later operating permit applications. So you get an initial operating permit with as much information as you have. You make it as complete to fulfill the requirements of 845. You get these impoundments under an operating permit application.

Yes, they will have additional data that will be incorporated into the construction permit applications, but a lot of times those construction permit applications inform later operating permit applications. So the reliance of this domino effect described today by today's witnesses the Agency views it differently and we view the process differently and based on the way the Agency intends to implement the program is why we chose -- believed we needed to object to the extension of the construction permit application.

HEARING OFFICER WEBB: Okay. Thank you. The expedited transcript will be available by Monday, July 26th and will be posted on the

Board's website. The public comment deadline is July 28th. Public comment must be filed in accordance with Section 101.628 of the Board's procedural rules.

The parties have agreed to the following briefing schedule. Both parties briefs are due by August 9th, 2021, with no response briefs. The parties are also reminded to review 35 Ill. Adm. Code 101.627 pertaining to the electronic filing of exhibits post-hearing.

Before we conclude, I will ask one more time if anybody else would like to make any comments? Okay. Seeing nobody, I will conclude the proceedings and we stand adjourned and I thank everyone for their participation. Thank you.

MS. ZEIVEL: Thank you.

MS. GALE: Thank you.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

I, Steven Brickey, Certified Shorthand Reporter, do hereby certify that I reported in shorthand the proceedings had at the trial aforesaid, and that the foregoing is a true, complete and correct transcript of the proceedings of said trial as appears from my stenographic notes so taken and transcribed under my personal direction.

Witness my official signature in and for Cook County, Illinois, on this _____ day of _____, A.D., 2021.

_____

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