ILLINOIS POLLUTION CONTROL BOARD

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IN RE: MIDWEST :

GENERATION, LLC : Case No. AS 21-3

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Hearing

Waukegan, Illinois

Wednesday, February 14, 2024

9:00 a.m.

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Reported By: Jessica Shines, CSR, RPR

Hearing held at:

WAUKEGAN CITY HALL
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Waukegan, Illinois 60085
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Pursuant to notice, before Jessica Shines, CSR, RPR, Notary Public in and for the State of Illinois.

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ALSO PRESENT:

BRADLEY HALLORAN, HEARING OFFICER

VANESSA HORTON, ESQUIRE

JENNIFER VAN WIE,BOARD MEMBER

ESSENCE BROWN, TECHNICIAN

C O N T E N T S

E X H I B I T S

P R O C E E D I N G S

(On the record at 9:00 a.m.)

THE HEARING OFFICER: Good morning, everybody. My name is Bradley Halloran. I'm the hearing officer with the Illinois Pollution Control Board. This is Adjusted Standard 21-3. It's continued on record from yesterday, February 13th, 2024. Happy Valentine's Day, everybody.

And Ms. Gale, would you like to introduce yourself and your crew, please?

MS. GALE: Yes. My name is Kristen Gale. I'm sitting here with my co-counsel Genevieve Essig and we're here on behalf of Midwest Generation, LLC.

HEARING OFFICER: Perfect. Thank you.

Mr. Gunnarson?

MR. GUNNARSON: I'm Charles Gunnarson. I'm counsel with Illinois EPA. I'm here with co-counsel Rebecca Strauss on behalf of Illinois EPA.

THE HEARING OFFICER: Thank you, sir.

Any administrative things we have to address before we get to Ms. Gale's next

witness?

MS. GALE: Nothing from me, sir.

THE HEARING OFFICER: Okay. You may proceed.

MS. GALE: Mr. Hearing Officer, we call Mr. Tom Dehlin.

THE HEARING OFFICER: Raise your right hand and Jessica will swear you in.

(Witness sworn.)

EXAMINATION BY COUNSEL FOR MIDWEST GENERATION

BY MS. GALE:

Q. Good morning.

A. Good morning.

Q. Could you please state your name and spell your last name for the record?

A. My name is Tom Dehlin, D-E-L-H-I-N.

Q. And Mr. Dehlin, what -- oh, before we begin, Mr. Dehlin --

MS. GALE: Mr. Hearing Officer, are we being filmed today?

THE HEARING OFFICER: No. Are we? Hold on, we'll check with the man behind the curtain. I haven't seen him this morning. There's no one back there,

Ms. Gale.

MS. GALE: Great. Thank you. And just -- but for the record, are you comfortable being filmed as you testify today?

THE WITNESS: No.

MS. GALE: Thank you.

BY MS. GALE:

Q. Mr. Dehlin, what is your educational background?

A. I have a bachelor's and master's degree in civil and environmental engineering from University of Illinois at Urbana-Champaign.

Q. And what professional licensing do you have?

A. I am a licensed professional engineer in the states of Illinois, Kentucky, and Wyoming.

Q. And Mr. Dehlin, what does it take to become a professional engineer?

A. You have to have degrees at an ABET-accredited university. You have to take two licensing exams. One's the FE, fundamentals of engineering, exam. Second is your PE, professional engineering, exam. And then you have to have three to four years, depending on your

education, of work performed under the supervision of a professional engineer.

Q. Mr. Dehlin, who do you work for?

A. I work for Sargent & Lundy, LLC.

Q. And how long -- how long have you worked for Sargent & Lundy?

A. Just over 10 years.

Q. And can you briefly describe for me what you do at Sargent & Lundy?

A. I'm a manager consultant at Sargent & Lundy, so I -- in addition to managing engineers that work in our civil engineering group. I also do various civil engineering design. My primary work is focused on coal combustion residuals management, whether it be design, operation or closure of coal combustion residual units.

Q. And what type of units are you talking about?

A. Primarily surface impoundments.

Q. And -- well, where are those units located.

A. I've done work for clients in Illinois, Indiana, Wyoming, Ohio, to name a few. I've -- Kentucky. Several across the United States.

Q. And but the -- they're at -- the surface impoundments, what kind of operations are they for?

A. They're to receive sluice, primarily bottom ash from coal fire power plants.

Q. And as part of your work at Sargent & Lundy, do you look at engineering drawings or what kind of drawings do you look at?

A. Yeah, I look at engineering design drawings, whether it's proposed new designs for retrofitting existing impoundments, building new impoundments, closing existing impoundments. Also, particularly when looking at closing impoundments, I find it very helpful to look at historical design drawings to understand how an area was originally designed, how it was operated, how it was maintained. That's very important to understand when looking to close a surface impoundment.

Q. And Mr. Dehlin, for more information on your experience and background, where can the board look?

A. My CV is attached to the back of my report, which I believe is Midwest Generation

Exhibit 27. Yes.

MS. GALE: Mr. Hearing Officer, we move to qualify Mr. Dehlin as an expert in coal combustion residual management, including historical practices of management, design, and operation, and closure of CCR surface impoundments.

THE HEARING OFFICER: Mr. Gunnarson?

MR. GUNNARSON: No objection.

THE HEARING OFFICER: Thank you.

So admitted. So granted.

BY MS. GALE:

Q. Mr. Dehlin, were you here yesterday during the public comment period?

A. I was, yes.

Q. Do you recall a comment that the Midwest Generation station has the potential to -- excuse me -- Midwest Generation Station impoundments have the potential to flow into Lake Michigan and cause offsite environmental impacts?

A. Yes, I recall a statement like that.

Q. And when you heard that comment, do you know what document the commenter was referring to?

A. That would be referring to the 2023

Hazard Potential Classification Assessment.

Q. And what is a hazard potential classification assessment?

A. It evaluates the consequences that would occur if a dam -- dike in this case -- dike for a CCR surface impoundments were to fail. It's set up based on guidance provided by the Federal Emergency Management Agency specifically for dams, but extended in this case for CCR surface impoundments.

Q. And so it's a hypothetical, if it were to fail, right?

A. Correct. You look at a situation. If the dike fails regardless of what its factor of safety is, how well maintained it is, you -- your starting point is this embankment has failed, what happens.

Q. You're familiar with the Hoover Dam.

A. I am.

Q. How are you familiar with it?

A. I was recently there in August visiting it. I've visited it a couple times.

Q. And what is it considered by the engineering --

A. The American Society of Civil Engineers has designated it as an ASCE landmark.

Q. And have you recently looked at its hazard potential classification?

A. I have.

Q. What is it?

A. It is considered a high hazard potential.

Q. And what does that mean?

A. That means if the Hoover Dam were to fail, there would be a probable loss of human life.

Q. Now, Mr. Dehlin, as a professional expert and an expert here, do you think the Hoover Dam will cause probable loss of life?

A. I do not think so. I was not involved in the original design or any sort of maintenance or inspection of the dam. However, it's been there since I think the 1930s, and I understand it to be continually inspected. And hundreds of tourists -- I shouldn't say hundreds. Thousands of tourists visit that site every year, so I do not think there's any signs that that dam is going to fail.

Q. So if someone is concerned with the stability of the east pond and dike, where would they look?

A. There's an annual safety factor assessment that is prepared, which was prepared last year at the same time the hazard potential classification assessment was prepared.

Q. Who prepared this annual safety factor assessment?

A. I did.

Q. And what does it say?

A. It says that the east dike is stable in accordance with recognized engineering guidelines promulgated by FEMA.

Q. Thank you.

I want to talk about another comment from yesterday. Do you recall the testimony about the ELPC Rising Waters study?

A. I do.

Q. And that testimony was related to concern over the rising Lake Michigan levels, right?

A. Correct.

Q. Have you had a chance to review that

report?

A. I've gone through it. I haven't reviewed it in great detail, but I'm aware of it and have gone through it.

Q. Was there a map of the Waukegan shore included in that report?

A. Yes.

Q. And in that map, what did it include?

A. In that map, it showed various -- I guess I would call it stages of flooding depending on the level of -- the water level of Lake Michigan. I believe it started at about Elevation 584, which was classified on that as a most likely condition, and then up to Elevation 589, which was classified on the map as a least likely condition.

Q. And did that map include the Midwest Generation station?

A. Yes, it did.

Q. I should clarify. The Midwest Generation station at Waukegan, right?

A. Yes.

Q. And what did the map show as it relates to the Midwest Generation Waukegan station and the CCR surface impoundments?

A. Notably, the east and west ash pond -- and I will extend it to the grassy field because that's the subject of discussion today -- those three areas were not flooded.

Q. And Mr. Dehlin, do you recall -- I believe also there was comments about concerns over the Lake Michigan drinking water from the Waukegan intake, right?

A. Yes.

Q. And, in fact, board member Van Wie asked about the Lake Michigan intake channel, right?

A. Yes.

Q. When you were listening to that testimony, did something come to mind?

A. Yes. I'm aware that the City of Waukegan every year publishes water quality reports and so I thought of the most recent water quality report that was published by the city.

MS. GALE: And we're going to hand out Midwest Gen Exhibit 44.

BY MS. GALE:

Q. Mr. Dehlin, what is Exhibit 44?

A. It's titled "City of Waukegan 2023

Annual Water Quality Report."

Q. And where is this document located? Where did you retrieve it from?

A. The City of Waukegan's website. Specifically, their water department.

Q. And -- well, generally speaking, what is your understanding of this report? What's its purpose?

A. Its purpose is to describe what the quality of water is that the city of Waukegan uses for drinking.

Q. And I want to turn to the right-hand side, bottom last paragraph. Can you go to the third sentence and can you read that into the record, please?

A. Yes. It states: According to the Source Water Assessment report, since the water supply's intake is 6,200 feet into the lake, there is low susceptibility to shoreline contaminants due to mixing and dilution.

Q. So first of all, 6,200 fight into the lake, how far is that?

A. More than a mile.

Q. And what's your takeaway from this

sentence? What do you -- what's the meaning of low susceptibility to shoreline contaminants?

A. The risk posed by shoreline contaminants -- i.e. Lake Michigan shoreline and Waukegan -- poses little risk to the city's drinking water supply.

Q. And does that include Midwest Generation shoreline?

A. Yes, that would include it.

Q. And that means also the groundwater that's coming off the Midwest Generation site?

A. Yes.

Q. Thank you. Mr. Dehlin, I want to turn to your Exhibit 27 which is in the binder you have in front of you. And I think you already identified it, but what is Exhibit 27?

A. Exhibit 27 is my expert opinion that I prepared on this matter.

BY MS. GALE:

Q. And in consideration of the grassy field, what question were you answering?

A. Whether the grassy field is a CCR surface impoundment as defined under the Illinois Environmental Protection Act.

MS. GALE: Can we put the demonstration on, also?

We'll get something on the screen for you.

THE TECHNICIAN: The PowerPoint?

MS. GALE: The PowerPoint, yes.

BY MS. GALE:

Q. Mr. Dehlin, I want to turn to the screen. What are we looking at here?

A. We're looking at two definitions.

Q. I'm sorry. What is the purpose of this presentation?

A. Oh, this presentation summarizes my expert opinion that I prepared and it specifically highlights key points that I make in my evaluation of determining whether the grassy field should be considered a CCR surface impoundment under the Illinois Environmental Protection Act.

Q. And who prepared this presentation?

A. I did.

Q. And Mr. Dehlin, if you flip to the last tab in your binder, which is -- it should be Tab 41, what is that?

A. It looks like my presentation.

Q. So a copy of your presentation is Exhibit 41 in this binder, right?

A. Yes.

Q. And where can someone look for the basis of the information in these slides?

A. In my report, which is Midwest Generation Exhibit 27.

Q. And I think you already answered this, but we'll start again. What is shown on Slide 1 of your presentation?

A. Slide 1 shows two definitions that are important to this matter. The first definition is the definition for a CCR surface impoundment under the Illinois Environmental Protection Act. The second definition is the definition for an inactive CCR surface impoundment as defined by Part 845, which I'll call the Illinois CCR rule.

Q. And we will get into detail how you got there, but in your expert opinion, is the grassy field a CCR surface impoundment?

A. No.

Q. Is it an inactive CCR surface impoundment?

A. No.

Q. What do you have to be to be an inactive CCR surface impoundment?

A. So to be an inactive CCR surface impoundment as defined under the Illinois CCR rule, you have to first be a CCR surface impoundment.

Q. Let's turn to the next slide, Slide 2, please. Mr. Dehlin, what are we showing on this slide?

A. This shows a 2022 area photograph of the Waukegan Generating Station. This is figure A-1 from my report.

Q. And what does the red -- do you see the red line? It's kind of hard to see in the figure, but the red line on the southern side of the -- red line -- or the red boundary on the southern side of the diagram?

A. Yes. It is hard to make out, but there's a red line that goes around the grassy area, the west ash pond, and the east ash pond, which as I'll explain later, I have defined as the original slag field boundary.

Q. And for the record, where is this picture also located?

A. Figure A-1 of my report.

Q. And it's in the binder sitting in front of you on a large -- on a large piece of paper, right?

A. Yes, it is.

Q. Yeah. So, generally speaking, on the South Side of the station, what is located there?

A. South Side of the station, there's a wastewater treatment plant.

Q. That's -- I meant -- I'm sorry. I was pointing to -- right. South of the station is the wastewater treatment plant. I'm looking at the pond. Just to orient ourselves, what are the -- -

A. Yes. So the south portion of the station's property, there are three entities going from east to west. You have the east ash pond, the west ash pond, and the grassy field. That total area is about 40 acres. Each of them are split about a third each. The east ash pond and the west ash pond each, including their embankments, are about 14 acres, which is what I have labeled there. If you look at just the impoundment area -- in other words, the area that holds an accumulation of CCR and liquids -- each

pond is about 10 acres.

Q. And looking at Figure A-1, where is the west -- approximately, where is the western boundary of the Midwest Gen station on the southern side of the station?

A. It's -- there's a parcel currently owned by ComEd that's to the west of the station's property line, which is represented by the red north-south line running along the west edge, right where it says "original slag field boundary."

Q. And then where is -- I think you already answered this, but what is the southern boundary of the midwest generation station?

A. The southern boundary is represented by the southern red line, which that's the property line the station has with the wastewater treatment plant to the south.

Q. Let's turn to the next slide, please. Mr. Dehlin, the question that you posed earlier -- to answer that question, what was your methodology? And I'll point you to page 3.1 of your report.

A. So my methodology, as detailed in my

report, is to gather as many design inputs as possible to assess the history of this site. So when you're trying to build -- I'll call it a "history of a construction," you want to rely on -- design drawings are preferable because that will detail engineering features. It'll call things out. We also looked at the NPDES permit records that were available in the Illinois EPA's recommendation in this matter. And then of course, historical area photographs. And we'll use those to build a timeline, a history.

And then once you have your design inputs gathered, the question we're trying to answer is, is the grassy field a CCR surface impoundment? And in order to be a CCR surface impoundment, a given area needs to meet three criteria, and those are per the Illinois Environmental Protection Act: The area has to be a natural topographic depression, a man-made excavation, or diked area; it has to be designed to hold an accumulation of CCR and liquids; and it has to be used to treat store or dispose of CCR. If it fails any one of those criteria, it is not a CCR surface impoundment.

Q. All right. So I want to talk about terms. Let's look at Part 2 or part -- Section B of your methodology.

Is the term "groundwater" in the definition?

A. No, it's not.

Q. And as the term "groundwater" is not in the definition, what can you conclude?

A. The location of groundwater within an area that you're trying to determine whether or not is a CCR surface impoundment has no bearing on whether that area is a CCR surface impoundment.

Q. And are the terms "pollution" or "contamination" in the definition?

A. No.

Q. And based upon that, what can you conclude?

A. The presence of pollution or contamination in an area that you are trying to determine is a CCR surface impoundment has no bearing on whether that area is a CCR surface impoundment.

Q. Let's talk about "accumulate." As a professional engineer, what does that mean?

A. To increase in quantity of something.

Q. Is there some sort of temporal or time element to it?

A. I think this was a discussion that was brought up, as I recall, yesterday in several witnesses, and I think the -- there has to be an increase in volume, under the context of the CCR surface impoundment, to allow for settling to occur. That's what's going on here. You have to have a volume of water that allows for sedimentation.

Q. Would the next slide with your diagram help you in this?

A. Yes.

MS. GALE: Can we move to the next slide, please?

BY MS. GALE:

Q. So Mr. Dehlin, what are we showing on Slide 4 of Exhibit 41?

A. So I'll focus on the left side this slide because this ties into the definition of a CCR surface impoundment and what the definition is meant to represent. An accumulation of water is important for a CCR surface impoundment because a

CCR surface impoundment is used as a settling basin or sedimentation basin to promote the settling of CCR particles in ash sluice water within the pond area prior to that water being discharged to some other place, whether it be a water source or something else.

Q. So what is the difference between -- so on the left-hand side where it says sedimentation, is that also accumulation?

A. Yes, you're -- so what you have is an accumulation of water that allows for CCR particles to settle out. In order for CCR to settle out in water, you need a certain height of water and you need time to -- gravity and time. That's what's required for sedimentation to occur. And you can only have settling if you have an accumulation of water that allows for ash particles to be settled out.

Otherwise, what you will have, if you look on the right-hand side, is infiltration where you have ash sluice water going into an area with -- this is permeable floor, uneven sandy floor, which is what the original conditions were at the slag field site at Waukegan. Or water will

infiltrate out through the permeable floor. And that sand floor works as a filter it filters out the ash as water infiltrates out through the bottom.

Q. And I guess going back, to accumulate water, what has to be at the basin -- the bottom -- excuse me -- the bottom of the basin?

A. You need some sort of barrier.

Q. And for infiltration, what do you want at the bottom of the basin?

A. You don't want a barrier. You want something that's permeable that's going to allow for water to infiltrate out, but that sand will work as a filter to keep the ash on top.

Q. And to encourage movement through an infiltration such as sand, in addition to sand, what would a property do?

A. So if you don't just -- you can't rely just primarily on the permeable floor, you can excavate a ditch to get water out of an area.

Q. Let's talk about the term "design" and I want to --

MS. GALE: If we can go back to Slide 3, please.

BY MS. GALE:

Q. And we see at B-2 the term "designed." As a professional engineer, what does the term "designed" mean? And I can point you to either your cover letter on your report or page 5.1.

A. Certainly. So the first thing that I did was look to see if there was a definition for "designed" either in the Illinois Environmental Protection Act or Part 845, which I did not see any. So for this matter, I went to Merriam Webster's where I go if there's not a definition in a statute or regulation. So I'd like to read the definition that I found in Merriam Webster into the record.

Merriam Webster offers two applicable definitions for the verb "design." One, to create, fashion, execute, or construct according to plan; or two, to conceive and plan out in the mind to have as a purpose or to devise for a specific function or event.

Q. And what did you take away on that definition?

A. To summarize, when you design something, you intend it to have a specific

function. There's a common phrase, Form follows function. The way that you design something to be, to operate, it's for a specific purpose. There's intent behind it.

Q. So as it relates to here, how does the design -- as it relates to the definition of CCR surface impoundments, how does the term "design" function?

A. How I would read this is the area is intended to hold an accumulation of CCR and liquids. And to extend it further, going back to the slide showing sedimentation --

MS. GALE: Can we go to the slide showing sedimentation on Slide 4?

BY MS. GALE:

Q. There you go.

A. You are intending this area to hold an accumulation of CCR and liquids to promote sedimentation. That is the primary function of a CCR surface impoundment.

BY MS. GALE:

Q. Let's turn to Slide 5. Well, Mr. Dehlin, what does this map show?

A. This is a property plat that shows the

property lines for the Waukegan Generating Station circa 1950. There's -- given the age of this drawing and its quality, I don't have an exact date for it, but it's circa 1950.

Q. And it it's in your report?

A. Yes, it is.

Q. And how did you use this map as part of your overall opinion?

A. So what you'll -- even though it's relatively poor quality, you can make out some very specific features. One, you can see slag field called out, probably in the middle of this slide. Slag field then has four arrows pointing out in it. You also see property lines and you also see a fence line just above where the drawing calls out slag field.

Why is this important? First thing that we want to do when assessing an area is define its boundaries. A good place to start when defining boundaries for a station, specifically a disposal site, is where are the property lines. So that's what this map was used for.

MS. GALE: Let's turn to Slide 6, please.

BY MS. GALE:

Q. And Slide 6, what are we seeing here?

A. This is a 1939 aerial photograph of the site. This is Figure A-2 in my report and what this shows is several features that are important in defining the boundary for the original slag field that predated the ash ponds and grassy field. So what I'm trying to do here -- what I am doing here is orienting us. I'm trying -- I'm showing the original slag field boundary so that we can go forward in time in several subsequent aerial photographs and see how this area changes.

Going through and preparing this report, there's a lot of documents to go through, and although this presentation is chronological and the report's chronological, what I did in reviewing documents was identifying features that are called out, particularly in the 1970s documents, and focusing on aerial photographs and seeing how specific features related to the operation of this area -- either were developed, changed over time -- trying to understand the history of this site. So what this shows is the original sand dunes of this site before slag was

sent out to the site, and the features that are labeled on here are just meant to orient so that the reader can focus on specific portions as they move through the aerial photographs in Appendix A of my report.

Q. And you mentioned the sand floor. So they call out an original slag field. That doesn't mean there's slag there right now, right?

A. Correct.

Q. Or excuse me. That doesn't mean there's slag as it's shown in 1939?

A. Yes, correct.

Q. Thank you. But is this the sand floor? When you were discussing infiltration, is this what you were talking about?

A. Yes it is.

Q. And at the bottom you have a call-out in blue. What is that?

MS. GALE: If we could blow that up so everybody can see.

BY MS. GALE:

Q. What is that showing?

A. That is the south ditch. I took that name from a circa 1970s NPDES permit document.

There's a sketch that we will show later in the presentation that shows this area labeled as "south ditch." So coming back to what I had said previously, I take features that are identified on the drawings or sketches and look at aerial photographs and try to track the history of that feature going backwards and forwards in time.

So this south ditch is particularly important to the operation of this area as we'll see throughout history, and here I'm identifying its presence in 1939.

Q. And we already discussed the property south of the property, but you said it's particularly important. What is south of the property that you -- south of the Midwest Gen property here?

A. A wastewater treatment plant, which I understand to have been present in 1939, so it makes sense that the south ditch would follow the southern property line for the station.

Q. Why does that make sense?

A. Because if -- as you'll see as we move forward in time, if you're placing waste out into this field, you'll want to ensure that waste does

not spill over onto the neighboring property.

Q. And we'll we're going to get into the rest of your aerial photos. The drawings on these aerial photos, who did those?

A. I did.

Q. Great.

MS. GALE: Let's turn to Slide 7.

BY MS. GALE:

Q. So what is Slide 7 showing?

A. This is a development plan that was prepared circa 1950 for Units 6 and 7. Specifically, what this shows is the planned expansion of the station's coal pile to support the two new units. Going back to the property plat that we had showed on previous slides, this focuses in on -- the northeast corner, I'll call it, of the slag field, which you can see called out on this drawing just below the boundary of the proposed expansion for the coal yard.

Q. I want to talk about the term "slag field." Well, you said earlier as part of your job, you look at historic drawings for power plants throughout the nation, right?

A. Yes.

Q. In your opinion, have you seen the term "slag field" in any of those other drawings?

A. I have only ever seen "slag field" called out specifically for the Waukegan Generating Station.

Q. At other stations, what are they called?

A. I've seen for an area receiving sluiced ash, typically it's "pond basin," something like that.

Q. What does that tell you?

A. That tells me that this area was not a pond. This isn't certainly the only thing I used to come to the conclusion that this area was not a pond, but the fact that it is called a field and not a pond tells me that a pond was not present here. Otherwise, it would have been called a pond.

Q. And who was drawing this drawing?

A. An engineer.

Q. And so it was the engineers who called it a slag field, right?

A. Correct.

Q. Yeah. And just for the record, where

does this drawing come from?

A. This drawing came from the Waukegan Generating Station.

Q. All right.

A. And there's one other feature I did want to call out here --

Q. Oh, sure.

A. -- I apologize, that's important to moving forward, two features that really helped out in determining boundaries and understanding the operation of this area. You see the fence line that runs through the middle of the proposed development for the coal pile. And then there's -- starting in the middle top of the drawing moving straight south, there's a slag line called out that even though it doesn't show to be continuing going into the slag field, presumably it goes into the slag field. So those two features were used to make adaptations on subsequent aerial photographs that we'll see.

Q. Got it.

MS. GALE: Let's go to Slide 6. Oh, wait. Slide 8, sorry.

BY MS. GALE:

Q. What are we depicting here?

A. This is a 1946 aerial photograph of the site. This is Figure A-3 of my report. And at this time looking at the difference between the 1946 aerial photograph and the 1939 aerial photograph, you see black or gray color in 1946 in the area that was previously white. And knowing on that drawing that we just looked at where we saw a slag line for the units 4 and 5 coming out to this area, we understand this area around this time is now being used to send sluice to slag to this area. So the black that you see now over this area of interest is slag.

Q. And let's go to Slide 9 because I think that'll help in our conversation. So what are we showing in Slide 9?

A. Slide 9 is an overlay of the drawing that we looked at in Slide 7 and over the aerial photograph shown in Slide 8. So this was helpful to understand what the northern boundary would be for the slag field, specifically the fence line that's called out in the drawing represents the northern boundary for the slag field. So doing this overlay allowed us to identify what that

northern boundary would be.

Q. And the South Side of the property, again, there's a blue feature. What is that?

A. That is the south ditch, as I said previously, a feature that was identified in 1970s documents. So we're tracking the -- what the south ditch looks like as you go backwards and forwards in time.

Notably for the south ditch, the reason we can say that it's a ditch at this time is if you look at the southeast corner of the original slag field boundary outlined in red, you'll see sort of a meandering path which is the natural path the water would have taken when discharged from the south ditch to get into Lake Michigan.

Q. And so for this slag field, what was its purpose for the station at that time?

A. It's purpose was to receive -- the station's trying to get CCR out of the station, so they're sending it to the slag field. So the area was meant to receive CCR, but it was also meant to remove water as efficiently as possible, whether that be through infiltration through the sandy floor. Or if water was to make it to the southern

end of the property, it would be received by the south ditch and would discharge into Lake Michigan.

Q. So Mr. Dehlin, as a professional engineer back in '46, was there a design here?

A. No, no.

Q. I mean, what do you mean by that? Explain yourself.

A. I don't see any -- one, it's interesting that there's no design features shown on the historical design drawings that we have for this area where it just calls out slag field. You see a pipeline that's sent out to an area, which tells me the station sent a pipeline out to the sandy floor, understanding that this water was going to infiltrate through the sand floor, the sand would filter out the CCR, keep that on top. They dug a ditch on the southern end to receive any potential runoff that would make its way to the southern end of the property and ensure you're not putting wastewater onto the wastewater treatment plant's property. But I don't see any other design or intent to accumulate certain liquids.

Q. In fact, what was likely the intent?

A. The intent was just to drain the liquids as fast as possible out of this area.

Q. So, Mr. Dehlin, in your expert opinion as a professional engineer, was the slag field designed to hold an accumulation of CCR and liquid?

A. No.

MS. GALE: Let's go to Slide 10, please.

BY MS. GALE:

Q. What does this diagram show?

A. This shows a 1961 aerial photograph of the site. This is figure A-4 of my report. The notable feature that I want to call out in this slide is the -- within the western area of the original slag field, you see a ditch that has been excavated starting in the northwest corner heading about straight south for most of its run before turning diagonally into the south ditch. So we know the south ditch exists. We understand its purpose. And going back through time, we see that it is constantly, constantly present. I mean, '39, '46, '61.

This feature that I've outlined in blue would have been excavated to ensure water would drain from the area that they're sluicing out to the south ditch out on Lake Michigan.

Q. So you said there's a ditch that's outlined in blue in the middle of the slag field, right?

A. Correct.

Q. How do you know that's a ditch?

A. So we knew the south ditch is a ditch and it's tied -- that feature is tied into the south ditch and it's a very narrow path. Using all of that evidence, it follows that that area is a ditch -- or that feature is a ditch.

Q. Right. Because if they're tying into the south ditch, what are they trying to do?

A. They're trying to drain water from the north and anywhere I guess adjacent to that ditch into the south ditch. You're trying to remove water as efficiently as possible. That's what a ditch is meant to do.

MS. GALE: Let's turn to Slide 11, please.

Mr. Hearing Officer, can we take a

10-minute break, please.

THE HEARING OFFICER: Sure. Before we go, though, I do want to note for the record that again like yesterday, we have member Jennifer Van Wie present. And we also have staff attorney Vanessa Horton and technical unit, Essence Brown.

MS. GALE: Thank you.

THE HEARING OFFICER: 10 minutes?

MS. GALE: Thank you.

THE HEARING OFFICER: Thank you. Off the record.

(Whereupon, there was a recess in the proceedings.)

THE HEARING OFFICER: We're back on the record at approximately 9:50 a.m. You may continue, Ms. Gale.

MS. GALE: Thank you, sir.

BY MS. GALE:

Q. Mr. Dehlin, we're looking at Slide 11 of your presentation, which is Exhibit 41. What does this show?

A. This shows an aerial photograph of the site from 1970. This is also Figure A-5 in my

report.

Q. What are the operations that you're seeing in this photo?

A. So for the first time in this site's history, we're seeing embankments constructed.

Q. Can I stop you right there?

MS. GALE: Can we blow-up that area so we can more easily see it?

BY MS. GALE:

Q. So you said it's the first time we're seeing embankments. Please continue.

A. Sure. So I'll start on the southeast side of the original slag field boundary and work my way around. So starting in the southeast corner, what you see is white, which is the sand that was excavated to make -- or is to make a embankment, but as a result of excavating creates what's labeled on this figure as "east ditch." So sand material was excavated from that ditch and used to create a embankment, and you can follow the sand embankment starting in the southeast corner, moving northeast, and then right when it gets to the northern boundary of the original slag field, it starts moving straight east. And then

you can follow the northern embankment further west until about two-thirds of the solid -- or I'm sorry, the slag field boundary, at which point that embankment turns straight south heading south towards south ditch. And then the embankment continues -- curves right before it gets to south ditch and meets up with the southeast corner of the sand embankment.

So for the first time at this site, you see a diked area has been constructed.

Q. And to the west, you said the boundary line on the western side, the west embankment -- what's to the west of that?

A. That is what I refer to as the inactive slag field. I refer to it as the inactive slag field because at this time this station is building its first ash pond to send sluice ash to. So this western third of this original slag field area is no longer going to be used for disposal of CCR from the station.

Q. And we'll get to it later and we'll touch upon it, but what -- look on the eastern side of the inactive slag field. What can you kind of see going on there?

A. The eastern side of the inactive slag field, there's an embankment that is being constructed to separate what I'd call the original ash pond at the site from the inactive slag field.

Q. And so is that fully-diked area that is for this new settling basin that you're identifying here -- does that include what is now known as the grassy field?

A. No, it does not. The grassy field area, as we'll show later, occupies the area that's labeled as inactive slag field in this photograph.

Q. And the southern feature that's in blue, what is there?

A. That's the south ditch that we've discussed and shown in previous aerial photographs, which maintains its same alignment, follows that southern property line, and extends to the western property line.

Q. And so it extends all the way to the western property line. Again, what does that, having that southern feature, the ditch there -- the western property line tell you?

A. Even though the inactive slag field is

now inactive and the station is no longer sending ash to the western third of this area, you still need to ensure there's not an accumulation of liquids. So that's what's what the station is doing. So by maintaining the south ditch -- and we see this in the 1974 aerial paragraph -- the station strategically modified this area to ensure that it would drain either predominantly south or a little bit to the north as well, so avoided accumulation of liquids.

Q. And I want to turn to Board Question No. 2. And we kind of touched upon it, but was the CCR from the western third of the old pond removed before the construction of the grassy field.

So first, what's your reaction to the term "old pond"?

A. "Old pond," as I understand, is the term the agency used to describe what I'm referring to as the original slag field. The original slag field was not a pond, so I understand that this question focuses on what is defined here as the inactive slag field, that western third of the original slag field.

Q. And based upon this photograph and your understanding, was -- well, was CCR removed?

A. Yes, some CCR was removed. You can see in this photograph cuts that have been made within the CCR that was placed there, but not all CCR was removed.

Q. Let's turn to Slide 12. What do we see here?

A. This is a sketch that appears in a, I believe 1972 NPDES permit application. This sketch is meant to show the sampling locations for the two discharge locations that the station is applying for to be allowed to discharge. One of those discharge points is shown in the area that has a line going around it that says slag field and in parentheses, settlement basin. This, as I understand it, will be outfall 02 which appears in other NPDES permit applications in the record.

So what this sketch shows if we go back to the -- we don't have to go back to the 1971 photograph, but if you recall that, this shows that the original ash pond, that first diked area, that would have been used at this time to receive sluice ash, and as it's called out in this figure

to function as a settlement basin. This is the first settlement basin that appears at the site.

And some notable features in addition to the line that goes around the area are the culverts. Culverts are used to discharge water through otherwise solid objects, so that line that goes around the slag field/settlement basin as it's called out here, which I refer to as the original ash pond. Are the culverts that would have been used to discharge water that had been treated. Two culverts flow into the north ditch which then flows in the east ditch out to Lake Michigan. And then there's a southern culvert that flows into the south ditch which then goes into Lake Michigan.

Q. And for the record, you have it marked here on this slide, but where is this drawing located?

A. Sure. This drawing is located in Midwest Generation Exhibit 22 at 11 and Agency Exhibit 32 at 17.

Q. And Board Question No. 3: Are there better quality versions of the chart/diagrams on page 9 through 10 of Exhibit 22? It's difficult

to decipher. Mr. Dehlin, where would we also -- I mean, we can see right here. I don't know if they're better, but perhaps clearer are Illinois Exhibit 32, right?

A. Correct.

Q. And in answer to the board's question. These are historic documents. They're -- you know, they're the best we can do.

And Mr. Dehlin, is this sketch to scale?

A. Absolutely not.

Q. And even not to scale and I think you mentioned some key features, how is it important and relevant to your opinion? Or is it useful for your opinion?

A. It is useful to my opinion because even though the sketch isn't drawn to scale, I can understand what the person who drew the sketch was trying to convey. The station sluiced via the slag lines that are called out on the sketch ash to a settlement basin that was used to settle out ash before treated water was discharged in that case with the NPDES permit that the station was applying for.

Q. And on the south side of the station what feature do you see?

A. The south ditch that was shown in aerial photographs going back to 1939.

Q. And what is the location -- in a east/west, what is the location of the south ditch?

A. Along the southern property line with the wastewater treatment plant to the south, and it extends to the western property line.

Q. And on the western side of that area, what is not shown?

A. There is a space shown between the settling basin and the western property line. And although it is not labeled, it is notable that the settling basin embankment doesn't extend all the way to the western property line. So this blank space based on that 1970 aerial photograph we just looked at would be the inactive slag field, which is the present-day grassy field.

Q. So I guess I'll ask this: Do you think that space is intentional?

A. Yes.

Q. Slide 13. What is Slide 13, Exhibit 41, depicting?

A. Slide 13 shows a 1974 aerial photograph of the site, which is figure A-6 in my report.

Q. And what are we seeing on the eastern side of Slide 14 -- excuse me, slide 13?

A. So recalling the 1970 aerial photograph of the site, we saw an ash pond under construction. Here in 1974 we see the settling basin operating. If you recall the 1972 sketch that we just looked at, this eastern two-thirds area that I've labeled as original ash pond is the settling basin that was called out in the 1972 sketch. You can see ash and you can see water that has accumulated within the pond supporting that this area is now operating, as we understand it, as a CCR surface impoundment. And we'll show later why we can say that this is -- we can differentiate between ash and water that is in this area. 1974 is actually the first time we have a design drawing that calls out key features.

So we'll touch on that in a little bit, but just to orient everyone, what we're seeing here in the eastern two-thirds is the original ash pond. I have called out the two discharge culverts and the northern boundary of the original

ash pond that were called out on the sketch that we just looked at. And you can see a peninsula -- or I guess I would call it an interior dike that separates the ash sluice line, which is shown in magenta, on the west side of the original ash pond and the discharge culverts that I've just discussed.

Q. And looking at Slide 13, which is your Figure A-6, what is the distinguishing features that lead you to your conclusion that the grassy field is not part of this ash pond?

A. You have an embankment that -- the western embankment that we discussed in the 1970 aerial photograph, that you can clearly distinguish about two-thirds along the area that's running straight north-south.

Q. And again, on the southern side in blue, what is that feature?

A. The south ditch.

Q. And how -- again, how far does the south ditch go?

A. To the western property line.

Q. And so when they -- well, if we have this embankment on the west hand side of what

you've depicted as the original ash pond, what is the intent then of the purpose of the embankment?

A. The intent is to hold an accumulation of water within the original ash pond to allow for settlement to occur. But also it functions as a means of ensuring that water -- that sluice water does not go into the inactive slag field area.

Q. Okay. Let's turn to slide 14.

Slide 14, what is depicted here?

A. This is an overlay of NUS Corporation drawing -- I'll read the drawing number here -- 5082-C-5005. NUS Corporation was the engineer of record that designed the wastewater treatment facilities for Waukegan in the late 1970s, which included construction of the east and west ash ponds. This is an overlay of the NUS Corporation drawing onto the area that the drawing represents. And I don't know if we're able to Zoom in to that overlay.

Q. Yeah.

A. So what I want to point out here is for the first time through this evaluation we not only have an aerial photograph, but we have topographic data that corresponds to an aerial photograph.

The aerial photograph in Figure 6 of my report is from 1974. The drawing from NUS Corporation is from the late 1970s, but the survey information that's shown is also from 1974. There's two topographic lines that are shown. The lighter lines represent topographic data obtained in 1974 around the time that the aerial photograph was taken.

Q. So yeah, just to be clear for the record, the lighter lines -- there are dark lines running north-south, right?

A. Correct.

Q. And so lighter, I guess almost beyond that, what do you see? Are those the topographic lines you're talking about?

A. Yes.

Q. Okay. And you gave the drawing number. Where is this drawing located in your report?

A. In Appendix B. I should also note going back to something that I previously said, the reason that we're able to discern ash material and water in the aerial photograph is because of this drawing. If you look on the middle right of the zoomed in area, you'll see some text. It's

hard to see on the screen, but if you look at Appendix B of my report, you'll see that the engineer labeled this area "ash pond water elevation equals 4.1." So they have clearly showed impounded water in this original ash pond area. Notably, no water is shown in the inactive slag field area.

Q. Thank you.

A. Yes.

Q. Let's turn to Slide 15, please. So Slide 15, what does this show?

A. This shows a heat map that we prepared using the NUS Corporation drawing, 5005. So what we did is took the topographic information that was provided on this drawing in 1974, imported it into Autocad, and then created a surface that then allowed us to show relative changes in elevation to better visualize what this area looked like on a 2D map.

So what this heat map shows is areas of higher elevation are shown in warm colors, areas of lower elevation are shown in cold colors, and it follows the order of the rainbow. So red is highest elevation, purple is lowest elevation.

Q. So looking at the heat map, the red, what is the red showing?

A. It shows the embankment for the original ash pond that was present there, which makes sense. The embankment was going to be built over existing land, so that's going to be the highest elevation. And then a feature that we have discussed several times today is the south ditch. That's the low point meant to drain everything out of this area. That shows up as purple, which is logical.

And then looking at how the colors change across the map, if you go west of the embankment, you'll notice that the colors go from red, orange, yellow, green, blue to purple. So that means runoff. So a lot of runoff from that area will drain primarily east to west and then south -- although there is some area near the north that will drain north into the north ditch that's annotated on this slide.

Q. So based on this heat map, which is based upon the topography from one of the original drawings, what are you -- well, what was the intent here?

A. The intent was to ensure that this area did not accumulate liquids, that when rain fell in this area it would drain predominantly south; or if it fell in a northern area, it would drain north.

Q. And just for my own edification, there's that little red button coming off the... what is that?

A. That's a mound of ash that if you continue following that red button, you can see that the colors change from orange to yellow to green. So think of it as just a mound that would have drained either to the south or to the north when rainwater hit.

Q. On the northwest corner of the inactive slag field, there's a not-colored area. What's going on there?

A. So if you looking at the original NUS Corporation drawing, that area is labeled "piles" and there's a dashed line that makes up the boundary of what these piles were. And you'll notice that the topographic data, survey data stops at these piles. That tells me that accurate survey information was not attainable in this

area, so it's excluded from the heat map because we don't have any topographic data.

But because it's labeled "piles," it would be piles of ash that when water hit it, would drain out. It's not like it was a depression meant to collect water or anything. It's piles of ash that are getting drained probably in this area to the north. Or if it was in the southern boundary, the piles would drain south.

Q. And have you been to the Waukegan station recently?

A. I have.

Q. Are there piles on that area to this day?

A. No, there are no piles.

Q. This heat map, where is it located in your report?

A. It is Figure 4-1 of my report.

Q. Let's turn to Slide 16, please. Slide 16 shows current record documents. How did these help in coming to your conclusion?

A. So these two specific exhibits from the NPDES permit record for the station that was

included in the agency's recommendation refer to how the original ash pond was split into the present-day east and west ash ponds. Or maybe what I should say more accurately, how the east and west ash ponds were constructed within the existing -- sorry -- within the footprint of the original ash pond. And both of these exhibits pertain to the same permit number, which is 1977 EB 3699.

Q. Let's turn to the next slide. And -- well, what are we looking at here?

A. Okay. So the picture that we see on the slide shows now NUS Corporation proposed to modify the ash settling basin at Waukegan as a part of the wastewater treatment facilities project that was constructed in the late 1970s. Specifically, what we're looking at is two lined ash ponds to be constructed within the existing -- I apologize -- within the footprint of the original ash pond.

Q. And the drawing is -- I mean, the reason we're correlating with the prior page is the drawing -- they're both from the same permit record, right?

A. Correct.

Q. Okay. And what do you have called out under Exhibit -- IEPA Exhibit 33 at 23?

A. This is the engineer of records', NUS Corporation's, description of the wastewater treatment facility that was being constructed. It's an excerpt from it specifically referring to how bottom ash is going to be handled at the station. And it states, The existing ash pond will be modified to provide for easier and redundant operation. The existing single pond will be split into two separate ponds, each approximately 10 acres.

Q. So I think earlier you stated that each of the two current ponds would be 10 acres. And this says each would be 10 acres. What does this tell you?

A. So this tells me that what the engineer is referring to is present day east and west ash ponds.

Q. What does it show west of the west pond? And I guess on this diagram it's called "lined ash pond No. 1"?

A. West of lined ash pond No. 1?

Q. Yes, sir. I thank you.
A. That is -- the engineer is calling out an area to be graded and seeded.
Q. And so that -- is that -- on that overlay we had of topography, is that what they're talking about here?
A. Yes. That drawing that we showed and the heat map refers to the area that is to be graded and seeded. The drawing showing the thicker lines, those would have been the grade that the contractor was instructed to slope this area.
Q. And based upon the drawing and the description, is the area west of lined ash pond No. 1 part of the existing single pond?
A. No, it is not.
Q. And looking west to the west side of the area to be seeded and graded -- well, I guess the area to be seeded and graded, what do we call that area now?
A. The grassy field.
Q. And looking to the west side of the area to be seed and graded, which you now call the grassy field, what do you see?

A. The modifications to be made to a ditch that runs along the western property line of the station, that ties into the south ditch, which -- excuse me -- is not referred to as the south ditch in this figure, but you can see it on the southern end or the bottom of this figure that "south ditch shown."

Q. And what does that tell you about having modifications to the ditch?

A. So the larger purpose of this project was also to drain stormwater -- or control stormwater runoff and ultimately drain it to the south ditch. So this western ditch, one, was to be modified to receive western stormwater runoff, but two, continued to be used to receive stormwater runoff from the grassy field after it sloped to drain to this western ditch.

Q. And again, what's the purpose of a ditch?

A. To convey water off of an area.

Q. Let's turn to Slide 18, please. Slide 18, what does this show?

A. This shows a survey of the site today, dated 2015. So you can see the east ash pond on

the right, the west ash pond in the middle. And it's not labeled, but you can see what we know today to be the grassy field on the west. This survey shows topographic data and consistent with what NUS Corporation specified on their design drawings from the 70s. This grassy field area slopes from the east to the west to the western ditch, which is not shown on this survey.

Q. But what's shown on the south on the survey?

A. The south ditch.

Q. And to your recollection, where is this diagram located?

A. In the history of construction, which was included in the agency's recommendation, but I forget the exact exhibit number.

Q. Does 45 sound familiar?

A. Yes.

Q. Thank you. Mr. Dehlin, based upon your analysis of the historic drawings, historic aerial photos, what is your conclusion about the grassy field?

A. The grassy field is not a CCR surface impoundment because it was never intended to

accumulate liquids. In fact, the exact opposite. The station continually took measures to drain or infiltrate water out of that area. It wasn't until 1970 with the construction of the original ash pond do we see the first intended use of an area to accumulate liquids and CCR for purposes of treating CCR sluice water.

Q. And the original ash pond you're talking about is on the eastern two-thirds of that property, right?

A. That's correct.

Q. What is the grassy field, in your opinion?

A. Non-containerized CCR fill.

Q. As part of your role and your expertise in CCR, do you pay attention to the rules that are proposed by state or federal agencies?

A. Yes. It's part of my job.

Q. And recently in 2023, what rule did the US EPA propose?

A. They proposed a rule that would establish and regulate two -- I'll call them new CCR units. Legacy CCR surface impoundments and CCR management units or CCRMU as they're referred.

Q. Do you have an understanding of what a legacy CCR surface impoundment unit is?

A. Yes. My understanding is it is an inactive CCR surface impoundment and an inactive electric utility.

Q. Does that definition apply to the grassy field?

A. No, it does not, for two reasons. One, the grassy field is not a CCR surface impoundment, so, therefore, it cannot be an inactive CCR surface impoundment. And two, Waukegan is an active electric utility.

Q. Do you have an understanding of the definition of a CCR management unit?

A. Yes. My understanding is a CCR management unit is non-containerized CCR placed on land.

Q. And could that also be called an unconsolidated fill area?

A. Yes, I've seen that term used. I think that would be applicable.

Q. Board question No. 4: If the grassy field is or has been used for the storage of quote, "unconsolidated fill," what is the status

of these piles?

So I guess, Mr. Dehlin, what is your understanding of unconsolidated fill?

A. As it pertains to the grassy field, I consider it to be non-containerized fill that's been placed on land. This ash, for this area, it is not exposed. I certainly wouldn't call it piles. It's been graded and seeded and I'm looking -- I mean, I've been to this station and seen this area. I have not seen ash. And then I know in Chris Lux's testimony yesterday, photographs were shown of the area that further demonstrate it's not piles of ash or ash that's just been left. This ash was graded and provided vegetative cover in the 1970s and has remained that way since.

Q. So I think we -- to clarify, there aren't any piles of CCR on the grassy field, right?

A. No, there are no piles of CCR on the grassy field.

Q. And so based upon your understanding of the proposed definition of CCRMU, what is the grassy field?

A. A CCRMU.

Q. Mr. Dehlin, in your expert opinion, if the board were to call the grassy field a CCR surface impoundment and the federal rule for CCRMU passes in April of 2024 and it's a CCRMU under the federal rule -- in your expert opinion, what do you see happening?

A. That becomes a logistical nightmare. You are trying to comply with regulations that treat the same area differently. Even if you look at the preamble to the proposed rule for CCRMUs, the US EPA makes it clear that there are specific regulations that do not apply to CCR management units that do apply to CCR surface impoundments.

There are also time frame issues. If the federal CCR rule when finalized for CCRMUs are brought into the federal CCR rule, there's going to be timelines established for doing certain activities. I'm sure one of those is going to be closure.

If this area is being treated as a CCR surface impoundment and there's time frames that accompany permitting for CCR -- addressing CCR surface impoundments, operating to close CCR

surface impoundments, it is very possible that you have a federal timeline and a state timeline that do not match. And that's going to cause problems for Midwest Generation.

Q. Mr. Dehlin, you were here yesterday for the testimony?

A. Yes. Which testimony?

Q. All of the testimony.

A. Yes.

Q. And did you hear -- you were here for Mr. Dunaway's testimony?

A. I did.

Q. And you heard that he stated that he concluded the grassy field was an abandoned pond in 2019. Do you recall that?

A. Yes, I do.

Q. And he based it on current to him at the time 2000s aerial photographs and its proximity to the current ponds?

A. Yes.

Q. Based on that description of the basis of their conclusion the grassy field was an abandoned pond, what can you conclude?

A. It seems like the agency's

recommendation that this area is an old pond is not based on any evidence. It's just based on an aerial photograph of an area that appears as a grassy field and could have easily been a landfill.

Q. I believe -- do you recall him referring to Exhibit 37 of the agency's recommendation?

A. Yes.

Q. And we can get the recommendation in front of you if you need what it's described as. Did you have a chance to take a look at Exhibit 37 last night?

A. I did. My understanding is Exhibit 37 is a series of NPDES permits that were issued for Commonwealth Edison stations, which included Waukegan, in 1977.

Q. Good memory. In your review of that exhibit, does that support that it was a CCR surface impoundment?

A. No, there's -- as I mentioned, that exhibit shows several NPDES permits, including Waukegan. One of those pages shows the discharge limits that were approved for the Waukegan

Generating Station Outfall 02 in 1977, Outfall 02 being labeled as ash pond overflow.

Going back to my testimony I just gave, in 1977 we know that the ash pond would have referred to the ash pond that was operated in the eastern two-thirds of the original slag field area, so it predates the east and west ponds, that single ash pond that was present in the 1970s.

Q. And so that single ash pond, did that include the grassy field?

A. No, it did not.

Q. Based on what you heard from Mr. Dunaway, and looking at the Exhibit 37, in your expert opinion of the agency's recommendation, where do you think the IEPA started with?

A. I think they started with a conclusion, and then looking through the evidence, looked at what fit that conclusion.

Q. As a professional engineer, in your opinion, is that the correct scientific method to go about answering a question?

A. No. The method I always follow as an engineer is starting with all the inputs,

outlining a methodology that is logical, and then reaching a conclusion based on what the inputs and the accepted methodology for whatever the problem is leads me to.

Q. Mr. Dehlin, I want to turn to the agency's recommendation.

MS. GALE: We passed it out to the participants yesterday, so I want to make sure everybody has it in front of them before we get started.

THE HEARING OFFICER: I do. Thank you.

BY MS. GALE:

Q. Mr. Dehlin, do you have the agency's recommendation in front of you?

A. I do.

Q. And to be clear for the record, it is the recommendation, but it does not include the attachments, right?

A. Correct.

Q. Only because they're over 1,300 pages.

Have you had a chance to review the agency's recommendation?

A. I have.

Q. And what was their conclusion?

A. Their conclusion was that the grassy field was an inactive CCR surface impoundment.

Q. And generally speaking, what do you think of that conclusion?

A. I disagree with that conclusion.

Q. Why is that?

A. Because the grassy field is not a CCR surface impoundment and, therefore, is not an inactive CCR surface impoundment.

Q. And why is it not a CCR surface impoundment?

A. Because it was not designed to accumulate both liquids and CCR.

Q. Let's start -- let's look at the agency's recommendation. Let's start on page 5 looking at paragraph 9. And looking at the second photograph where the agency states: However, well before the grassy field was graded and seeded -- citing Exhibit 33 -- a CCR surface impoundment, or an old pond, existed and operated in this area. And they cite to Exhibit 2. Do you see that there?

A. I do.

MS. GALE: Can you put Exhibit 2 of the

agency's recommendation on the screen, please?

BY MS. GALE:

Q. In your opinion, does this aerial photo show, other than the description they inserted, an old pond?

A. No, it does not. This figure shows the aerial photograph of the site from 1946 that I discussed previously in my testimony, which shows the original slag field, which is not an old pond.

MS. GALE: And can we zoom in on the old pond area, please?

BY MS. GALE:

Q. Okay. I want to show -- what are the features that you used to determine this is not a old pond?

A. The most notable is -- well, there's two notable ones. Starting with the south ditch, which you can see at the bottom of this zoomed-in portion of the picture -- you can see the south ditch was excavated along the southern property line and was designed to discharge water that would have made it to the southern line to Lake Michigan.

The other feature is you can see on the right sand. That's the white that's present there. Although it's not shown in this photograph, we did look at the 1939 photograph that showed the original sand dunes here. So sand being present underneath the ash shown in this picture, ash sluice water that goes out to this area is either going to infiltrate through the sand floor; or if it does make it to the southern end of the property, it's going to go to the south ditch and be sent to Lake Michigan.

Q. The next sentence in paragraph 9 where the agency states: This now inactive CCR surface impoundment comprises the area of the grassy field, east pond, and west pond, citing the Agency Exhibit 5. Can we turn to Agency Exhibit 5, please?

Mr. Dehlin, does the aerial photo show an inactive CCR surface impoundment?

A. No, it does not.

Q. Why not?

A. It shows the present day grassy field, west ash pond, and east ash pond, which is over the area of the original slag field. But the

original slag field was not a CCR surface impoundment and the grassy field is not a CCR surface impoundment.

Q. Does Exhibit 5 even state inactive CCR surface impoundment?

A. No, it does not.

Q. Okay. Let's turn back to the recommendation going to paragraph 10. Are you there?

A. Yes, I am.

Q. Okay. Where the agency states that, The old pond has been referred to in various permit documents as the "slag ash field" or "settling basin" or "ash pond." And they cite to Agency Exhibits 32, 33, 35, 36, 38, and 39, and there's a footnote. Do you see that there?

A. Yes, I do.

Q. What's the problem with this paragraph 10?

A. So as we've established, the original slag field was not an old pond, which is -- the area that old pond is referring to is that entire area currently occupied by the grassy field, west pond, and east pond. So having that context, it

says that this area, referred to in various documents as the slag ash field or settling basin or ash pond, is incorrect. They use permit documents when referring to this -- I'll just call it settling basin or, as I refer to it in my report, as the original ash pond, is only concerning the eastern two-thirds of this area. It does not include the grassy field area.

Q. And let's use an example. You see the footnote on paragraph 10?

A. Yes.

Q. And the first citation of the footnote is Exhibit 35?

A. Yes.

MS. GALE: Can we go to Exhibit 35?

BY MS. GALE:

Q. What is this Exhibit 35?

THE WITNESS: Can you move forward one page?

MS. GALE: One more page? Yeah, thank you.

THE WITNESS: This appears to be a permit from November, if I'm reading that correctly, 1974.

MS. GALE: Let's go to the next page. There we go.

BY MS. GALE:

Q. And so in your analysis of the grassy field, was the grassy field part of the ash pond?

MS. GALE: We can go to page 10, if we can, on this. So three to seven more pages. 3, 4... 7. One more. One more. Oh. It's on page 10 of this document. Nope, that's not it. Never mind. All right.

BY MS. GALE:

Q. But in your analysis of the grassy field, was the grassy field part of the ash pond referenced in this document?

A. No. The agency exhibits, which generally refer to NPDES permits or water pollution control permits -- when this area is referenced, it is referring to the eastern two-thirds of the site, which excludes the grassy field.

Q. And if you see in that footnote, they cite to various agency documents that are in the permitting record, right?

A. Yes.

Q. And to your recollection, what are the earliest documents attached?

A. Earliest would be 1970, 1972.

Q. I think 1972 is right. And how is that date relevant to your analysis?

A. So as we showed in the aerial photograph from 1970, the station was constructing the original ash pond within the eastern two-thirds of the site. So the earliest document being from 1972 when referencing "ash pond," "settling basin," would be referring to the original ash pond that occupied the eastern two-thirds of the site.

Q. Let's turn to paragraph 11 in the agency's recommendation, first sentence where the agency states, Based on measurements from aerial photos, old pond originated as a 30-acre sand dune field, off of the Lake Michigan shoreline. And they cite to Exhibit 1.

MS. GALE: Can we post Exhibit 1 of the agency's recommendation, please?

BY MS. GALE:

Q. Other than the term "old pond," which we've stipulated the agency created on its own, do

you agree that Exhibit 1 supports the agency statement?

A. Yes. This 1939 aerial photograph shows the site as it would have been naturally, sand dunes.

Q. And then continuing on in paragraph 11: Over time liquid and CCR were deposited within the entirety of the old --

MS. GALE: Let's leave it up there still, please.

Q. -- entirety of the old pond. And "Id," meaning they cite to Exhibit 1. Now, does Exhibit 1 show that CCR was deposited within the entirety of the old pond?

A. No. This aerial photograph predates using the site to dispose of CCR.

Q. Okay. And looking through the rest of paragraph 11 where they say that the old pond, which we agree is a term they've created, was modified and divided into three approximate 10-acre areas, citing an aerial, you know -- and they continue on.

Generally speaking, for the rest of paragraph 11, what is your opinion of the agency's

claims?

A. So outside of taking exception to calling this area as an old pond, it does appear, reading through the rest of paragraph 11, that it identifies how this area was split up into the entities that exist today: The grassy field being the western third of this site, and the eastern two-thirds being present day east and west ash ponds.

Q. Let's turn to paragraph 18 of the agency's recommendation. Last sentence where the agency states "old pond is a settling pond" and they cite to Exhibits 32 and 36. Do you agree with that characterization? I'm sorry. 32, 36, and 38. Do you agree with that characterization?

A. No, I do not agree with that characterization. The mechanism that was occurring in this area up until about 1970 was infiltration, not settling.

Q. And I can actually hand you what I have here. To your recollection, what are the -- we just discussed the earliest dates in the agency's exhibits, which are permit records. Do these exhibits support that the original slag field was

a settling pond?

A. No. It -- the settling pond that appears in the permit records in the agency's exhibits is the original ash pond that occupied the eastern two-thirds of this site, which excludes the grassy field.

Q. Going to paragraph 19, I want to focus on this second sentence where the agency states, The water from the sluiced wastewater was treated by settling out the solid CCR prior to discharge. And they cite to Exhibit 2. Do you see that?

A. I do.

Q. So first, in your expert opinion, was the station -- and Exhibit 2, if you recall, was from 1946, right?

A. As I recall, yes.

Q. Okay. In your expert opinion, in 1946, was the station treating sluiced wastewater?

A. No, it was not. It was sluicing wastewater to the slag field, which would then -- the water would infiltrate through the sand floor, leaving the CCR solid on the sand floor. Or if water was to make it to the southern end of the property, it would go into the south ditch and

then drain into Lake Michigan.

Q. Let's turn to the next sentence: As the CCR sluiced water flowed into the depressions, the naturally sandy conditions allowed the water to slow down and infiltrate into the ground. Do you see that there?

A. I do.

MS. GALE: Can we put that on the screen, highlight that? Blow it up.

BY MS. GALE:

Q. So what is the agency describing in this operation in this sentence in paragraph 19?

A. They're describing infiltration of sluiced water through the sand dune floor for the original slag field.

Q. And they don't have a citation here, but do we think that they're relying upon Exhibit 2?

A. Yes. That's the exhibit that's been referenced twice in this paragraph, so I presume that that is the exhibit being relied upon here.

Q. So in your opinion, I mean, at least, are they -- is this description of the action that is happening in this sentence, about infiltration

into the ground, is that accurate?

A. Yes. It's infiltration of water into the ground.

MS. GALE: So can we turn back to his PowerPoint presentation, Slide 4?

BY MS. GALE:

Q. I want to look back on your Slide 4 of your Exhibit 41, which is your PowerPoint presentation -- the diagram of sedimentation or infiltration. If there was infiltration, what is not occurring?

A. Accumulation of water.

Q. So if there's no accumulation of water, what is the mistake the agency is making here?

A. The agency is incorrectly concluding that ash sluice water being sent to this area makes it a CCR surface impoundment. But because we have infiltration and not accumulation -- specifically accumulation to allow for sedimentation to occur -- this site is not being operated, and certainly was not designed to operate, as a CCR surface impoundment.

Q. And by that, do you mean designed -- what's in the definition, designed to do what?

A. To accumulate both CCR and liquids.
Q. Isn't the definition designed to hold an accumulation?
A. Yes, it is.
Q. Of CCR and liquids?
A. Yes.
Q. Yesterday you heard me asking the questions about pasta water. Do you recall that?
A. Yes.
Q. And so you've cooked pasta?
A. Yes.
Q. In water?
A. Yes.
Q. And have you used a sieve or a colander to drain out?
A. Yeah, I have.
Q. In your expert opinion as a professional engineer, is the sieve holding -- as you are passing the water and pasta into the sieve, is the sieve holding an accumulation of liquid and pasta?
A. No. The whole purpose of a sieve, the way it's designed is to get water out and keep the cooked pasta in so you can transfer it to whatever

your next dish is.

Q. So, again, what is the mechanism that the sieve is doing?

A. It's filtering. It's getting water out and leaving pasta in the pot.

MS. GALE: Okay. Let's turn back to the recommendation. Can we show Agency Exhibit 4? I want to turn to Agency paragraph 20.

BY MS. GALE:

Q. So the agency states: By 1974, the design within the old pond was modified. Old pond utilized designed man-made excavations and dikes (berms)within the dune field to settle CCR from sluiced water prior to discharge. And they cite Agency Exhibit 4. Do you see that there?

A. Yes, I do.

Q. So what is your opinion of the agency's description here?

A. It's -- the mechanism is correct. However, by referencing old pond, they are saying that the entire area was used to settle CCR from sluiced water when, in fact, it was just the eastern two-thirds that was a diked area that was

used to settle CCR from sluiced water.

Q. And looking at the agency's Exhibit 4, does that support -- well, how does Agency Exhibit 4 support what you're saying?

A. So if you look at Agency Exhibit 4 -- if we can Zoom in on the area that's labeled, you can see where the west pond and east pond are labeled. You can see the embankment or diked -- or dike that goes around the eastern two-thirds of the site. But specifically, the western embankment for that original ash pond stops at the grassy field and runs straight south. So only the original two-thirds of this site is being used as a settling basin. The grassy field is not being used as a settling basin.

Q. And calling back to your presentation where we had these overlays in the 1974 photo --

A. Yes.

Q. Is that the same photo that they have here in their exhibit?

A. Yes, it is.

Q. So looking at that of the grassy field, what can you see in this photo that is the purpose of the grassy field?

A. The purpose of the grassy field is it's been maintained to ensure that it drains primarily to the south to south ditch. Some of the northern edge drained north to the north ditch.

Q. And looking at paragraph 20 where the agency -- agency's recommendation paragraph 20 where the agency also relies upon Exhibit 32 and 35. Do you see that?

A. I only see Exhibit 32 referenced.

Q. I'm sorry. Exhibit 32 at 5 and 17. My bad. Do you see that?

A. Yes, I do.

Q. Do you have a recollection of what that exhibit is?

A. I believe that's the sketch.

Q. And that's the sketch of the slag field that was in your presentation?

A. Yes, the sketch from the 1972 NPDES permit.

Q. And do you -- does that sketch support the agency's statement here in paragraph 20?

A. No, it does not. That sketch shows a line -- or enclosed line, loop, I guess -- that is meant to represent the diked area that we see here

for the original ash pond, and specifically excludes the grassy field area between the western embankment of the original ash pond and the western property line.

Q. Let's look at the agency paragraph 21. And so the -- in paragraph 21, the agency describes a pond as shown in Exhibit 4 and Exhibit 32. Do you see that in that whole paragraph?

A. Yes, I do.

MS. GALE: If we could get Exhibit 4 on the screen. Oh, this is Exhibit 4.

BY MS. GALE:

Q. You relied on these same documents, right?

A. Yes, I did.

Q. So here, does their discussion in paragraph 21 support the classification of the grassy field as a CCR surface impoundment?

A. No, it does not.

Q. Why not?

A. Because the berms that are being referenced in this paragraph are referring to the berms for the original ash pond, which I've shown in my testimony only represents the eastern

two-thirds of the site. It does not include -- the berms does not encompass the grassy field.

Q. What is the agency trying to imply here in paragraph 21?

MR. GUNNARSON: Objection. Calls for speculation.

MS. GALE: He's an expert. He's entitled to make --

THE HEARING OFFICER: I think I'll allow him to give his opinion as an expert. Overruled.

THE WITNESS: By continually referring to this area as an old pond -- "old pond" understanding that it's meant to represent the grassy field, west pond, and east pond as we know them today -- and describing the berms that have been constructed and what they're meant to do, it seems that the agency is trying to imply that this entire area functioned as an ash pond at this time, when it did not.

BY MS. GALE:

Q. And right. This paragraph -- what is this paragraph actually talking about?

A. It is talking about the original ash pond that occupied the eastern two-thirds of this site.

Q. Okay. Let's turn to paragraph 22.

A. Okay.

Q. The last sentence where the agency states that the old pond received CCR that had been sluiced, and they cited to Agency Exhibit 32 at 5. Well, again, what's your take away from what the agency is saying in paragraph 22?

A. So looking at old pond as being the original slag field, yes, it did receive sluiced CCR. But this earlier paragraph stating how -- or how CCR surface impoundments are to be used -- it seems as if the agency is implying because an area received sluiced CCR, it therefore must be a CCR surface impoundment. But that is not part of the statutory definition of a CCR surface impoundment.

Q. In fact, we heard the agency stipulate that the definition of a CCR surface impoundment does not include the term "sluice" or any mechanism by which CCR would have reached the -- right?

A. Correct.

Q. So would you agree with that?
A. Agree with --
Q. With the stipulation.
A. Yes, I would.
Q. Let's look at paragraph -- oh. So looking at paragraph 22 of the agency's recommendation, in your opinion, how does this paragraph address whether the grassy field is a CCR surface impoundment?
A. It does not.
Q. In your opinion, is it important at all?
A. No, it does not matter how the CCR got to the area to determine whether or not the area is a CCR surface impoundment.
Q. Similarly, let's look at paragraph 23.
A. Okay.
Q. So in by 1946 old pond was receiving CCR that had been sluiced to the dune field, citing Exhibit 2. And reading on throughout the paragraph 23, does this paragraph support the agency's contention that the grassy field or the slag field in 1946 was a CCR surface impoundment?
A. No, it does not.

Q. Please explain.

A. So paragraph 23, the second sentence states "as evidenced by photographs the presence of what appears to be a delta from liquid deposition -- so this delta being CCR that's been deposited -- which allows liquids to flow into depressions between the dune peaks indicates that sluiced water containing CCR liquid was sent to old pond. So a delta would represent CCR being contained there, but promoting liquid flowing away from the area into a sandy area -- or even if it was to extend to the southern area, the south ditch. That's showing a promotion of liquids away from the area to either infiltrate to the sandy floor, or if it gets to the south, as we know would go into the south ditch, into Lake Michigan. So this paragraph does not support that the original slag field was designed to accumulate liquids.

Q. Let's go to paragraph 24 of the agency's recommendation. We see in paragraph 24 the agency is relying upon Exhibit 4 and Exhibit 36 by stating, In 1974 the old pond continued to receive CCR that had been sluiced to the dune

field. And again, the second sentence: The 1974 NPDES permit application demonstrates that the old pond received sluiced CCR. Do you see that there?

A. I do.

Q. And again, does that -- does the information in paragraph 24 support the agency's contention that the grassy field is a CCR surface impoundment?

A. It does not because by 1974 the original ash pond was operating in the eastern two-thirds of the area, which would have been receiving the sluiced CCR, which is what's referred to in the 1974 NPDES permit application.

Q. And again, the agency's referring to the action of sluicing here in '74, right?

A. Yes.

Q. Is that material at all to the evaluation of whether the grassy field is a CCR surface impoundment?

A. It is not because the method in which CCR is placed into an area has no bearing on whether that area is considered to be a CCR surface impoundment.

Q. So the paragraph --

MS. GALE: You know, Mr. Hearing Officer, is this a pretty good opportunity to take a five-minute break?

THE HEARING OFFICER: Sure. Off the record. Five-minute break.

(Whereupon there was a recess in the proceedings.)

THE HEARING OFFICER: And Ms. Gale, continue, please.

MS. GALE: Yes, thank you.

BY MS. GALE:

Q. Mr. Dehlin, I want to turn to paragraph 25 of the agency's recommendation. Are you there?

A. Yes.

Q. And do you see the agency is copying a paragraph from the US EPA federal rule, right?

A. Yes.

Q. And then it's a quote from the federal rule, right, for the US EPA's 2015 CCR surface impoundment rule?

A. Yes, it is.

Q. And you see the first sentence after the US EPA quote where the agency states, This scenario is applicable because the old pond was a

settling pond receiving sluiced CCR from ComEd, quote.

What's the flaw in that sentence?

A. The flaw is "old pond" refers to the original slag field area, which includes grassy field, present day west pond, present day east pond. But as we've seen today, the settling pond that predates the east pond and west pond only occupied the eastern two-thirds of the site. It did not include the grassy field.

Q. And again, in relation to the term "sluice," what is the agency incorrectly implying here?

A. That because an area receives sluiced CCR, it therefore must be a CCR surface impoundment.

Q. Let's go to the second sentence in paragraph 25 where the agency states, old pond met the definition of a CCR surface impoundment because it utilized a natural topographic depression design within a dune field to hold an accumulation of CCR (directly sluiced CCR from ComEd). Mr. Dehlin, what term is missing in the agency's sentence?

A. The term "liquids." In order to meet the definition of a CCR surface impoundment, the dune field would have had to have held an accumulation of CCR and liquids. This statement only refers to holding an accumulation of CCR.

Q. And so what's not being accumulated?

A. Liquids.

Q. What does that mean to you?

A. That means that the original slag field was not a CCR surface impoundment.

Q. Let's go to the third sentence in paragraph 25 of the agency's recommendation.

It also engaged in the treatment of CCR through its settling operation as a settling pond, citing to Exhibit 2. Mr. Dehlin, we can put Exhibit 2 back on the screen.

Do you agree that Exhibit 2 shows a settling pond?

A. No, it does not. This exhibit shows the aerial photograph of the site from 1946, at which point the mechanism of separating ash from water would have been through infiltration, not sedimentation or settling.

Q. And by "infiltration," what was not

happening?

A. The accumulation of liquids.

Q. And so paragraph 25, final sentence where they state, By 1961 and 1974, old pond designed man-made excavations and dikes (berms) within the dune field to settle CCR from sluice water directly received from the electric company prior to discharge. And they cite to Agency's Exhibits 4 and 32. Do you see that there?

A. I do.

MS. GALE: First, can we look at Exhibit 4?

BY MS. GALE:

Q. What date is Exhibit 4?

A. 1974.

Q. And looking at -- and you can look at your -- the list of exhibits the agency has attached to their -- for 32. What date is Agency Exhibit 32?

A. 1974.

Q. So do either of the exhibits support any conclusions about what was going on in 1961?

A. No, they do not.

Q. And looking at -- second, as earlier

discussed with Agency Exhibit 4, where are the berms and dikes as discussed in this sentence -- paragraph 25, last sentence?

A. Within the eastern two-thirds of the site, excluding the grassy field area.

Q. And to your recollection of Exhibit 32, does that show berms in the grassy field?

A. No, it does not.

Q. And the agency cites to the entire Exhibit 32. Where do we think they're looking at?

A. The sketch.

Q. Let's turn to paragraph 27. And looking at the third sentence, second line down where they state, ComEd was issued a permit stating ComEd would construct and operate two water pollution control facilities to replace the single settling basin (old pond) that existed previously. And they cite to Agency Exhibit 33 at 23. Do you see that?

A. I do.

MS. GALE: Can we go to Mr. Dehlin's PowerPoint Slide 17?

BY MS. GALE:

Q. Okay. Is this in Slide 17, the highlighted area? Is that what you think they're talking about?

A. Yes.

Q. And do you agree with that sentence, the third sentence in paragraph 27, and what they're saying?

A. The sentence is accurate, but not precise. And the reason I say that is the term/statement referring to the single settling basin in the old pond. The single settling basin only occupied the eastern two-thirds of the site whereas old pond being referred to here is meant to also encompass the grassy field. But as we can see here, the grassy field is not included in this operation to split the single settling pond into two water pollution control facilities.

Q. I want to go back to Agency -- keeping this on the screen, looking at agency paragraph 27, the fourth sentence where they say, The permit established that the east pond would occupy the eastern one-third of the old pond; the west pond would occupy the middle one-third of it -- actually, the middle one third; and the western

one-third of the old pond was the grassy field to be graded and seeded. And they cite to Agency Exhibit 45 at 13, right?

A. Yes.

Q. So -- well, what is the agency saying here?

A. The agency is saying that the old pond would be split into three.

Q. So, Mr. Dehlin, if you compared the fourth sentence and the -- excuse me -- the third sentence and the fourth sentence, how does that math work?

A. It does not because the prior sentence said old pond was going to be split into two and then the following sentence we just looked at said it was going to be split into three. So the math does not agree there.

Q. So again, how did the agency get this wrong? What's the mistake they're making here in these two sentences?

A. The agency is indicating that the settling basin that is referenced in the permit record refers to the entire area: Grassy field, present day east pond, present day west pond;

whereas we have demonstrated today the single settling basin only occupied the eastern two-thirds of the site. It did not include the grassy field area.

MS. GALE: And just for the record, if we could go to PDF page of the agency's recommendation 984. This is, I'll state for the record, Agency Exhibit 45, page 13.

BY MS. GALE:

Q. What is this drawing, generally?

A. This drawing shows the modifications that were to be made to the site as part of the wastewater treatment facilities project. If you look at the right of the drawing, it shows the area that we were just looking at on the previous slide. It shows construction on the east pond, the west pond, and how the grassy field was to be graded and seeded.

Q. And keeping this -- bearing this back in mind, can we go back -- keep this in your head, but go back to your presentation slide 17.

How does the Agency Exhibit 45 page 13 compare to Agency Exhibit -- I'm sorry. Was it 45? Yes -- compare to Agency Exhibit 41 at 4?

A. They're essentially the same.

Q. Okay. So in your opinion, in looking at the Agency Exhibit 33 at 23 where they're talking about the existing single pond being split into two separate ponds ten acres each, does that include the grassy field?

A. It does not.

Q. So do either Agency Exhibit 33 or Agency Exhibit 45 support the agency's contention that the grassy field is a CCR surface impoundment?

A. They do not.

Q. Why not?

A. Because the exhibits refer to how the original ash pond, which only occupied the eastern two-thirds of the site, was going to be split into present day east and west ponds. The grassy field was not part of that original settling basin.

Q. Let's go to paragraph 28, the second sentence where the agency states that the grassy field -- second sentence. I'm sorry. Third sentence. Old pond was a depression or excavation was designed to hold an accumulation of CCR and liquid and the CCR surface impoundment stores or

disposes of CCR.

Do you see that there?

A. I do.

Q. Is there a citation for that sentence?

A. There is not.

Q. And based upon the documents and paragraphs that we just discussed, is the agency accurate that the slag field that they called the old pond, which we know is a term created by them, is a CCR surface impoundment?

A. No, their sentence is not correct. The area was not designed to hold an accumulation of CCR and liquids.

Q. So both paragraphs -- I want to turn to paragraph 28. Keep that in mind, the design part, and then looking at the paragraph 29 where they also talk about "designed," the term "designed." Do you see that?

A. I do.

Q. And have you had a chance to review these paragraphs before today?

A. I have.

Q. So what do you think about the agency's conclusions here about the term "designed"?

A. So what the agency is referring to in paragraph 29, there's an excerpt from USWAG v. EPA, specifically the decision from the DC court of appeals on the 2018 case where the court parsed what "is disposed of" means. And the agency extended that to apply to what "is designed" means. And the agency states similarly, "designed" is the past tense of design, while "is" allows the design to exist even if the initial design was in the past.

So while I agree with that, what we've shown is the original slag field was not designed to accumulate liquids. So, therefore, using this sentence to argue that the original slag field is a CCR surface impoundment because its initial design was to hold an accumulation of CCR and liquids is not accurate.

Q. Let's turn to paragraph 30. So paragraph 30, the agency -- we'll start with they're describing the definition of the term "hold," right?

A. Yes.

Q. Do you see -- let's go -- one two three, four, five. Do you see the fifth line down

where they say the word "hold" in parentheses is a verb defined as "to enclose or keep in a container or within bounds or prevent from leaving or getting away." Do you see that there?

A. I do.

Q. Now, let's go to the last sentence: The extent to which liquids are held within a impoundment is dependent upon several factors, including its design, use, or permeability at the bottom of the impoundment. I'm sorry. That was not the last sentence.

The last sentence was, old pond was never lined and is located on beach sand, allowing rapid infiltration of liquids from the impoundment. Do you see that?

A. I do.

Q. If there's a rapid infiltration of the liquids, in your expert opinion as a professional engineer, does that mean to enclose and keep in a container or within bounds?

A. No, it does not.

Q. Please explain.

A. By infiltration, rapid infiltration, water is leaving that area. You're not allowing

liquids to accumulate.

Q. And then I want to go back to page 11, still on paragraph 30, third line from the bottom where they say, The act of keeping or retaining can be a temporary condition.

Do you see that there?

A. I do.

Q. What is your reaction to that statement?

A. I disagree with it in the context of a CCR surface impoundment. In order for a CCR surface impoundment to operate, you have to have that accumulation of both liquids -- that can be referred to also as a hydraulic head that's present -- which with that volume of water, that depth of water allows for ash particles to settle to the pond floor.

So yes, it can be a temporary condition, but you need a -- you need a certain quantity of water in order for a CCR surface impoundment to function how it's designed to function.

Q. And it can be a temporary condition, but -- well, for infiltration, what is the very

nature of infiltration as it relates to this condition?

A. You're not keeping or retaining any water. Water's leaving out through the pond or sand floor.

Q. And looking at their definition of "hold," to enclose and to keep in a container within bounds, in your opinion, as you consider infiltration, how does that compare?

A. That's the opposite of infiltration. You have a barrier. You have something that is containing that water to that specific area. If you have an opening anywhere in that container, whether it be the sides or through the floor, you're not holding anything. It's either infiltrating out through the bottom -- even if you just consider like one side of the container open, it's -- the water's going to move out through that open opening. It's a ditch, right? A ditch can contain water within its area, but the purpose of a ditch isn't to hold it, it's to convey it.

Q. Let's look at paragraphs 32 and 33 and after you've had a chance to review them -- the agency's talking about the permits they've

attached, right?

A. Yes.

Q. Yeah. And so -- but again, based upon the dates, how are these permits related to your analysis of the grassy field and the CCR surface impoundment?

A. So these NPDES permits would, because it's an NPDES permit, refer to discharges from an ash pond. And we know going to the first one in 1972 you have the original ash pond that only occupied the eastern two-thirds of the area, that eventually that area became present day east and west ash ponds. So in the context of the grassy field, these NPDES permits have no applicability.

Q. Let's go to paragraph 35, the first sentence where the agency states, Grassy field is a CCR surface impoundment that stopped receiving CCR by 1980 when east and west ponds were constructed on top of the eastern two-thirds of the old pond. And they cite to Exhibit 45 at 13 and Exhibit 5. Do you see that there?

A. I do.

Q. Again, what is your reaction to this statement?

A. So there are a number of things to correct based on my testimony today. First, the grassy field is not a CCR surface impoundment. The grassy field area when it was part of the original slag field also stopped receiving CCR about 1970 instead of 1980. And the east and west ash ponds were constructed on top of the eastern two-thirds of the original slag field, which did not function as a pond. The original pond that was there, which did occupy the eastern two-thirds, did not include the grassy field.

MS. GALE: We're going to show Agency Exhibit 45 at 13 again on the screen just so everyone has an understanding.

THE TECHNICIAN: Say that again? Sorry.

MS. GALE: Agency Exhibit 45 at page 13, which is PDF page 984.

BY MS. GALE:

Q. So does this support the agency statement in paragraph 35?

A. It supports that the east and west ponds were constructed on top of the eastern two-thirds of what's called the original slag

field area. But it does not support the contention that the grassy field is a CCR surface impoundment.

Q. Let's go to Agency Exhibit 5 on the screen again. Does this support the agency statement in paragraph 35?

A. No, it does not.

Q. And tell me why.

A. The east and west ponds do occupy the eastern two-thirds of the original slag field area, but the grassy field is not a CCR surface impoundment. This picture taken in 1980 is after the area has been graded and seeded. And as we saw in the records, design drawings, and in the 2015 survey, the grassy field was graded to drain stormwater to the west.

Q. Let's turn to Agency paragraph 36. The agency states in the first sentence, and I'll paraphrase or go to the end, There's no mention or documentation or other evidence that's been presented to the agency showing that the old pond -- which they have stated is a term they created -- CCR materials were removed or covered in a manner that would prevent infiltration. And

they continue to talk about closure.

Do you see that there?

A. I do.

Q. And the consideration of whether an area was closed, is that related to whether the area qualifies as a CCR surface impoundment under the definition?

A. No.

Q. Why not? And we can go back to one of your slides, if that's helpful.

A. Yes, please.

MS. GALE: Can we go to Slide 4, please?

THE WITNESS: So for an area to be considered a CCR surface impoundment, you have to have an accumulation -- it has to be designed to hold an accumulation of CCR and water. The purpose for this requirement is to promote sedimentation, which is shown on the left. An area that is still allowing for infiltration, regardless of whether or not it's been closed, is not going to be classified as a CCR surface impoundment under the statutory definition.

BY MS. GALE:

Q. Now, you see in that first sentence, the agency said that the agency states "a cover to prevent infiltration," right?

A. Yes.

Q. And what kind of infiltration do we think they're talking about there?

A. Rainwater.

Q. Precipitation?

A. Yes.

Q. And you were here when Ms. Shealey and Mr. Dorgan testified?

A. Yes.

Q. And what's your understanding based upon their testimony that Midwest Generation proposed for the agency to do?

A. My understanding is that Midwest Generation proposed to the agency to install an engineered cover over this area of the grassy field.

Q. And what would an engineered cover do?

A. It would preclude the infiltration of rainwater into the CCR in that area.

Q. Thank you. Let's turn to paragraph 43

of the agency's recommendation. Let's look to the last sentence. I'll read it, then we'll break it down. "This characterization, as explained above, is inaccurate as aerial photos from 1946, 1961, and 1974, and the 1974 NPDES permit application demonstrate that the grassy field received sluiced CCR when it was part of the larger old pond." And they cite to Exhibits 2 -- Agency Exhibits 2 and 3 and Agency Exhibit 36 and 28. Do you see that there?

A. I do.

Q. So let's break this down starting with the last part of that sentence, that it received sluiced CCR. Now, we're going to sound like a broken record, but, Mr. Dehlin, how is it -- or is it relevant that any area received sluiced CCR as a consideration of whether that's a CCR surface impoundment?

A. An area receiving sluiced CCR or the manner in which an area received CCR has no bearing on whether the area is classified as a CCR surface impoundment under the statutory definition.

Q. And it's earlier in that sentence where

they say -- or excuse me, later -- at the end of that sentence where they say, "when it was part of the larger old pond."

Mr. Dehlin, in your expert opinion, what are the mistakes in that phrase?

A. So understanding the larger old pond to be the original slag field that I presented day, it is accurate that the area received sluiced CCR in 1946 and in 1961 when the original slag field was operating. However, we know that by 1974, the eastern two-thirds had been converted into an original ash pond, the settling basin.

Q. Was the grassy field ever part of a old pond?

A. No, it was not.

Q. Let's go to paragraph 44, second sentence, where the agency states: The old pond was operated in the same location as the west pond and the east pond in addition to the 10-acre grassy field area to the west of the west pond. And they cite to Agency Exhibit 45 at 13 and Agency Exhibit 33 at 23.

MS. GALE: And let's -- I want to look at these documents again. Can we go back to

Agency Recommendation Exhibit 45, page 13, which is PDF page 984?

BY MS. GALE:

Q. And we've seen this -- we've already seen this before, right?

A. Yes.

Q. Okay. And now can we now turn to your presentation slide 17? And that cites to Agency Exhibit 33 at 23?

A. Yes.

Q. And that's what the agency is citing to here in this sentence in paragraph 44?

A. Yes.

Q. And again, the second sentence on Agency Exhibit 33 at 23, The existing single pond will be split into two separate ponds, each approximately 10 acres. Do you see that there?

A. I do.

Q. Again, Mr. Dehlin, does the math work?

A. No, it does not. The original pond --

Q. Please --

A. The original pond was only split into two, the east pond and the west pond. The original cash pond at this site did not include

the grassy field area.

Q. So looking at the sentence where -- I mean, they said a third, a third, a third, right? In the second sentence.

A. Paragraph 44?

Q. Of paragraph 44.

A. If doesn't specifically say a third, a third, a third. But it does reference that the old pond -- it does state the old pond occupied all three areas.

Q. And -- well, right. So let's look lack on Agency Exhibit 45 at 13, which is PDF page 984. So does this support the agency's statement -- does this drawing support the agency's statement in the second sentence of paragraph 44 that the old pond comprised all three areas?

A. No, it does not. What this drawing shows is that the original ash pond at the site only occupied the area currently occupied by the west pond and the east pond.

MS. GALE: Can we highlight the east and west pond and the grassy field to be closer?

BY MS. GALE:

Q. I think we discussed this earlier. You see the drawing of the new ponds, right?

A. Yes.

Q. Do you see behind that drawing various lines?

A. Yeah, there are dashed lines that are shown that are lighter.

Q. What are those dashed lines that are shown that are lighter?

A. Those represent existing features. Specifically to this area, what we're looking at are original outlines for the tops of the original ash pond that existed in that area.

Q. And how does that inform your opinion here?

A. What it shows is the extent of the original ash pond only occupied the eastern two-thirds of the original slag field area. The east and the west ash pond were only constructed within that eastern two-thirds area and excludes the grassy field. The grassy field is not included in the original ash pond boundary.

Q. Okay. Let's turn back to paragraph 45. And again, second sentence where the agency says,

The agency has found no information indicating that the bottom of the old pond was lined, including the grassy field portion.

Do you see that there?

A. I do.

Q. What's the flaw in that sentence?

A. The grassy field was not part of the original ash pond at this site.

Q. Okay. And then continuing on in that paragraph 45, where the agency states that, The grassy field -- last sentence. The grassy field remains an unlined inactive CCR surface impoundment as defined in 35 Ill ADM Code 845.120. Do you see that there?

A. I do.

Q. And your opinion is it's not accurate?

A. It is not accurate because an inactive CCR surface impoundment as defined by the regulation that you just cited requires the area to first be classified as a CCR surface impoundment, which the grassy field is not.

Q. And then Paragraph 46, third sentence. "As described, the grassy field originated from the old pond." And they cite again to Agency

Exhibit 45. And again, Mr. Dehlin, in your expert opinion, what is your reaction to that statement?

A. That it's inaccurate. The grassy field was not part of the original ash pond that was present at the site.

Q. And again, similarly, the next sentence where the agency states, The old pond is an active [sic] CCR surface impoundment. I know you just said it. Please say it again. What is your reaction to that statement?

A. The old pond cannot be considered an inactive CCR surface impoundment if you're referring to the original slag field area because the original slag field area was not a CCR surface impoundment.

Q. Ultimately, Mr. Dehlin, what is your conclusion and recommendation here?

A. Ultimately, the grassy field is not an inactive CCR surface impoundment because it is not a CCR surface impoundment. Now, with that said, I do that recommend that the grassy field be addressed. My understanding sitting through testimony yesterday is that there are avenues and options for the area to be addressed. I do

understand with the proposed CCR management unit rule being out there, it is important to -- when that rule becomes finalized under the court order, that Midwest Generation comply with those final regulations and work through those to address this grassy field area.

MS. GALE: I just need a minute, Mr. Hearing Officer.

THE HEARING OFFICER: Okay. We're off the record for a minute.

(Whereupon there was a recess in the proceedings.)

THE HEARING OFFICER: You may proceed.

MS. GALE: Thank you.

BY MS. GALE:

Q. Mr. Dehlin, have your opinions today been given with a reasonable degree of scientific certainty?

A. Yes.

MS. GALE: We have nothing further for now.

THE HEARING OFFICER: Okay. I think we might have a question or two.

Member Van Wie, any questions?

MS. VAN WIE: No.

THE HEARING OFFICER: No?

Staff member Horton?

MS. HORTON: Yeah, I just had two quick questions. Slide 11 of your presentation, it was a 1970 photo of the area --

MS. GALE: We can put it on the screen.

THE WITNESS: Yes, please.

MS. HORTON: I'm just curious. In your expert opinion, what is the activity occurring in the grassy field area?

THE WITNESS: It looks like they are excavating and then removing CCR. As you see in the 1974 aerial photograph, that shows, I believe, how the site was left before it was to ultimately be graded and seeded. So here, I think we see CCR being removed. And as we see further in 1974, the area was strategically maintained to ensure that it would drain properly.

MS. HORTON: And has Midwest Generation estimated the cost of complete removal of CCR from the grassy field?

THE WITNESS: Not to my knowledge.

MS. HORTON: Those are my questions.

THE HEARING OFFICER: Ms. Brown, any questions?

MS. BROWN: No, Mr. Hearing Officer.

THE HEARING OFFICER: All right. Thank you.

Mr. Gunnarson, I assume you have cross. I don't know how much, whether you wanted to take an early lunch. It's entirely up to you. It's about 11:45, so.

MR. GUNNARSON: Oh, no, I think we can go forward --

THE HEARING OFFICER: Okay. All right.

MR. GUNNARSON: -- right now and see where we're at. It shouldn't be long.

THE HEARING OFFICER: All right. Perfect.

MR. GUNNARSON: Are you planning on any other witnesses?

MS. GALE: I'm done.

MR. GUNNARSON: Okay.

THE HEARING OFFICER: All right. Thank you. And Jessica, we have that on the record hopefully.

Mr. Gunnarson, your witness.

EXAMINATION BY COUNSEL FOR THE ILLINOIS EPA

BY MR. GUNNARSON:

Q. Mr. Dehlin, besides your testimony today, what, if any, roles did you play in preparing MWG's petition and another petition for our adjusted standard in this matter?

A. I prepared the report, which was Midwest Generation Exhibit 27 -- which, to my knowledge, is the extent of the role that I've played.

Q. Okay. So you had no role in assisting with the drafting of the original petition that was filed back in 2021?

A. No, I did not help draft the original petition that was filed in 2021.

Q. And any of the amended petitions that were filed thereafter?

A. No.

Q. Okay. When did you first visit the Midwest Gen Waukegan site?

A. It was late 2010s. I can't pinpoint the exact area, but it was late 2010s.

Q. And you hadn't been there prior to that

point; correct?

A. I -- correct.

Q. Okay. And you've -- you've never seen the site prior to the present state of grassy field and the two existing east and west ponds?

A. Correct.

Q. Have you ever spoken with anybody who was present at the site who viewed the site in its state prior to the grassy field east and west pond configuration?

A. I have not.

Q. Would you agree that a dune, like a sand dune, is a mounding or a piling of sand or other material?

A. Yes, that sounds reasonable.

Q. And would you call the low point of a sand dune a swale?

A. Not necessarily because a swale is analogous to a ditch where it's used to convey water out. So depending on what the alignment looks like for a sand dune, it may not be a swale. It depends on what it looks like in plan.

Q. But there might be a -- there's a high point and a depression, essentially, with a dune;

correct?

A. Yeah, there would be a high point and a low point. Yes.

Q. And you're aware that -- I think you testified earlier today that the station area referred to as an ash slag field contained sand dunes; correct?

A. Yes. The slag field -- the original slag field area was over the original sand dunes. Yes.

Q. And I believe, as you noted in your Slide 8, your Figure A-3 of your Exhibit 27, which is the '46 aerial photo of the site, there was ash throughout the ash slag field?

A. Yes.

(Reporter clarification.)

BY MR. GUNNARSON:

Q. Did the low points in the sand dunes -- were the low points in the sand dunes a natural topographic depression at the site, or depressions at the site?

A. Yes, they would be.

Q. And as the facility sluiced ash over the years to the sluice ash field, ash accumulated

in that ash field, you'd agree?

A. Yes.

Q. Okay. And through the process of sluicing, you would agree that what happens essentially is that water is added to a material, like an ash, to help move it from Point A to Point B?

A. Yes. It's mixed and then it would be pumped out to the site.

Q. Okay. And so as that ash then deposits into the site, the sluiced ash -- the ash goes someplace, the water goes someplace. Correct?

A. Correct.

Q. And that is at a power plant. I'm assuming since you worked at power plants before, that's a rather continuous process.

A. What do you mean by "continuous"? Like 24/7 or --

Q. In the sense that a power plant is probably operational the majority of days a year and so it would, thus, be burning coal, thus, it creates ash. So how often -- I mean, how often does ash get sluiced.

A. It varies station to station. My

general understanding of a typical operation, though, is it would be batched. So it's not going to be sluicing for 24 hours, but it might be sluiced for a certain period of time every eight-hour shift, let's say. I don't have an exact time. It varies from station to station.

Q. Fair enough. And you don't have any information of how it was done at Waukegan Station?

A. No, I don't know how it was done at Waukegan Station.

Q. Okay. But you would agree that there is a continuing periodic addition of ash and water to the site that's ultimately receiving the ash and water; correct?

A. Yes, they are continually sluicing ash throughout the operation of the power plant.

Q. And have you studied the area where the ash and sluice water was deposited at Waukegan based on the geologic properties of the sand and the soils there?

A. I've looked at boring logs through the -- that have been taken throughout the site to have an understanding of what was naturally there

and what has been since placed there, if that answers your question.

Q. Okay. So you don't necessarily have an opinion today as to when if ash and sluice water would be deposited in the slag field, how quickly that material would separate -- the water would separate from the ash?

A. I couldn't put a specific time to it. But understanding that that is a sandy material, I would say it would go through relatively -- it would infiltrate relatively quickly.

Q. And in your understanding -- Counsel put up, I think, your exhibit. But basically, there was the definition of a CCRSI and the act, and basically, there's no time frame there related to the consequent accumulation. Is that correct?

A. No, there is no time frame.

Q. Okay. And likewise, there is no definition specifically related to the word "hold." Is that correct?

A. There is no statutory or regulatory definition for the word "hold" in my understanding.

Q. Can a CCRSI discharge water?

A. Yes.

Q. And, in fact, there were -- the east and west ponds at the site do discharge water; correct?

A. Yes.

Q. Through an NPDES discharge?

A. Yes.

Q. Okay. Turning back to the '46 photo, your Exhibit A-3, there's no evidence of any ditches within the slag -- within the actual interior of the slag field area; correct?

A. Not that I'm able to identify.

Q. Okay. And I think you noted earlier that a ditch may be used to convey water from one point to another; is that correct?

A. Yes. It's the primary function of a ditch.

Q. Okay. And thus, it would be fair to say that there was water accumulating within the slag field out of time such that this ditch that you indicated existed was constructed?

A. Are you referring to my 1961 aerial photograph --

Q. Yes.

A. -- in this question?
Q. Yes.
A. Yes. So -- and I think you're asking was this ditch constructed to convey any water that would accumulate within the original slag field area to the south ditch? Is that a correct interpretation of your question?
Q. Generally, yes.
A. Yes, what was what that ditch would have been excavated to do.
Q. Okay. So to move an accumulation of water?
A. Yes.
Q. Turning to your Slide 12. Slide 12 was in your Exhibit, MWG's Exhibit 22 at 11, IEPA 32 at 17.
A. I'm sorry. What slide was this?
Q. 12.
A. 12. Okay.
Q. Do you know who produced this slide -- or who produced this figure?
A. I don't know specifically who produced this figure, but I do know it is referenced as Figure 3 to correspondence related to the 1972

NPDES permit application.

Q. So fair to say you've never spoken with the individual who created this drawing; correct?

A. Yes, that's correct.

Q. Okay. And you indicated there is no scale to this drawing. Is that correct?

A. That is correct.

Q. So based on the fact there is no scale to this drawing, there really isn't a way to determine how far the person who drafted this considered slag field to run on east/west across the property; correct?

A. I would argue that if the slag field went up to the west property line, because both the property line and the slag field boundary are shown, that whoever prepared this would have drawn the settling basin extending to that west property line.

MR. GUNNARSON: Nothing further, your Honor.

THE HEARING OFFICER: Thank you, Mr. Gunnarson.

Ms. Gale?

MS. GALE: Yes, just a few clarifying

questions.

RE-EXAMINATION BY COUNSEL FOR MIDWEST GENERATION

BY MS. GALE:

Q. He asked you about the documents you prepared in support of Midwest Gen's recommendation and you said your report, right?

A. Yes.

Q. Which is Exhibit 27?

A. Yes.

Q. What about Exhibit 41?

A. I apologize. Yes, I did prepare the PowerPoint presentation.

Q. Okay. So you were asked about the definition and not including a time frame. Do you recall that?

A. Yes.

Q. And he also asked you about the definition of "hold." Do you recall that?

A. Yes.

Q. And it's not in the definition, right?

A. Correct.

Q. Let's go back to the agency's recommendation, paragraph 30.

A. Okay.

Q. Okay. What is the agency's definition of "hold" in paragraph 30? And I can refer you to -- one, two, three, four -- fifth line down, the word "hold."

A. The word "hold" is a verb defined as, to enclose and keep in a container or within bounds or prevent from leaving or getting away. Synonyms include keep or retain.

Q. Do you agree with that definition?

A. Yes.

Q. So in your expert opinion, even though it's not defined in the Act, would you use that definition for the definition of CCR surface impoundment?

A. Yes.

Q. And so even though there's no time frame in the word "hold," in your expert opinion, does the term "hold" -- well, what is your implication as it relates to time?

A. There's enough time to accumulate the water that's required for a CCR surface impoundment to function how it's intended to function.

Q. Okay. And then Mr. Gunnarson asked you

about your 1946 photo, the 1946 aerial photo. I want you to turn back to that.

A. Okay.

Q. And he asked you to identify whether there were any ditches within the area. Do you recall that?

A. Yes.

Q. And there was a ditch on the south end, right?

A. Correct.

Q. And this was 1946, right? So -- well, this was 1946, right?

A. Yes.

Q. As you went through these area photos and you saw the progression of this area, in your expert opinion, over time, what was needed eventually but not needed here, and why?

A. So over time, ash is accumulating in this area. So you have the original sand floor that we see in 1939 and over time you're going to see a build-up of ash. So initially, water's going to infiltrate through, but as you have this continued build-up of ash, you do have potential for water to accumulate. So in order to drain

that out faster instead of just relying on the original sand floor or even just infiltration through the CCR that's been built up there, it is likely a more efficient means of ensuring water was removed from that area would be excavating a ditch, which we see in the 1961 aerial photograph.

Q. So in 1946, in your expert opinion based upon this, what you saw in 1961, was an internal ditch needed?

A. It does not appear to have been needed.

Q. But does that mean that they were accumulating liquid here?

A. No.

Q. Mr. Gunnarson asked you about if the ditches were used to move an accumulation of water. Do you recall that?

A. Yes.

Q. Now, does having an accumulation of water, does that mean it's designed to hold an accumulation of CCR and liquid?

A. No. As I said, a ditch is designed to convey. It's not designed to hold. You keep it within the boundaries of the ditch, but from the starting end to the -- high end to the low end,

you're moving that water away from the area.

Q. And Mr. Gunnarson asked you about the Slide 12, which is that hand drawing that is in Agency Exhibit 33.

A. Yes.

Q. And he asked you about your interpretation of what the -- well, this is presumably drawn in the early 1970s, right?

A. Yes.

Q. Long before your time, right?

A. Long before.

Q. So but in your understanding, what kind of professional drew this drawing?

A. I'm -- I would guess an engineer drew it to convey the concept that they're trying to show that was the subject of this NPDES permit, which was-- specifically, what this figure references is the sampling locations. The sampling location, I apologize, for the settling basin. I mean, as an engineer, when I've interacted with regulatory agencies, sometimes it is faster just to sketch something. I've certainly drawn sketches, not to scale before, but just to convey a message.

Q. And so in looking at this drawing, again, what message are they conveying?

A. They are conveying that the settling basin only occupies a certain area of the original slag field, which went from the east ditch to the west property line. But there is a clear break between the settling basin boundary and the western property boundary.

MS. GALE: Can I just get a minute, sir?

THE HEARING OFFICER: Sure. Off the record for a second.

(Whereupon, there was a recess in the proceedings.)

MS. GALE: Nothing further for now. Oh, sorry.

THE HEARING OFFICER: I'm sorry. We're back on the record.

Mr. Gunnarson, any recross?

MR. GUNNARSON: Yeah, one re-cross.

RE-EXAMINATION BY COUNSEL FOR THE ILLINOIS EPA

BY MR. GUNNARSON:

Q. So based on your response to counsel's question about what was going on in the ash slag

field from 1946, in the ditch, you'd agree that there was a blinding of the sand material that was in that slag field that was creating an inefficiency in draining off water?

MS. GALE: I'm sorry. What was that question again? There was a what.

MR. GUNNARSON: Blinding, B-L-I-N-D-I-N-G.

THE WITNESS: Could you please define "blinding"?

BY MR. GUNNARSON:

Q. Have you worked with filter systems before?

A. Not specifically with water treatment filter systems.

Q. Do you understand the term of when a filter gets blinded?

A. No, I do not.

Q. Okay. We'll use a for instance. Do you use a coffee filter?

A. Yes.

Q. When you brew coffee and the grounds sort of fall through and then the liquid kind of comes through, but it goes slower and lower

because the grounds build up in it.

A. Clogging the opening?

Q. Exactly, yes. That's what I'm talking about.

A. Oh, yeah.

Q. The filter acts less and less efficiently because the material being filtered -- or materials, it's building up too much and doesn't allow the water or liquid or whatever's there to work through.

A. Correct.

Q. So basically, the accumulation of ash over the years there was causing a situation where water was accumulating because it was acting less efficiently; correct?

A. Based on what was done in 1961, there appears to have been a need to excavate a ditch through the original slag field to allow for water to drain out more efficiently. So it is possible that the buildup of ash precluded as much water to infiltrate through the sand floor as was probably present at the original condition. So they excavated this ditch to intentionally ensure that that accumulated water was not permitted to stand

there.

MR. GUNNARSON: I have nothing further.

THE HEARING OFFICER: Thank you.

Ms. Gale?

FURTHER EXAMINATION BY COUNSEL

FOR MIDWEST GENERATION

BY MS. GALE:

Q. So he asked you about -- yes, one final question. He asked you about filterings and them getting -- in my term, layman's term -- getting plugged up was my understanding of what he was saying. Right?

A. Yes.

Q. So in that incidence, in 1961 and 1946 and before, what were they designing the area to do?

A. They were designing it to drain water away, whether it be by infiltration or it be by the ditch that we saw was excavated in' 61.

Q. And was the water designed to hold an accumulation of CCR and liquid?

A. No. The station took active measures to ensure that the area would not hold an accumulation of CCR and liquids.

MS. GALE: Thank you. Nothing further.

THE HEARING OFFICER: Mr. Gunnarson?

MR. GUNNARSON: No follow-up.

THE HEARING OFFICER: We have a question from Ms. Horton.

MS. HORTON: I had one quick question. You testified that the sand dunes would not qualify as natural topographic depressions under the definition of CCR surface impoundments under the Act.

(Reporter clarification.)

MS. HORTON: CCR surface impoundments under the Act.

So I'm just curious in your expert opinion what examples would you give of a natural topographic depression that would qualify?

THE WITNESS: I do want to clarify it could be a natural topographic depression.

MS. HORTON: A sand dune?

THE WITNESS: Yes.

MS. HORTON: Okay.

THE WITNESS: We'd have to understand the topography better. So certainly, if

there's a depression within an area, that would qualify as a natural topographic depression. What I am testifying to is that the area cannot be a considered a CCR surface impoundment because it was not designed to accumulate liquids and CCR. So it's that second criteria for the CCR surface impoundment definition that this area fails to meet, and therefore, the area cannot be considered a CCR surface impoundment.

MS. HORTON: In your expert opinion, could you give me an example of a topographic depression that would fit that definition?

THE WITNESS: Usually, what I have seen for CCR surface impoundments that rely on a natural topographic depression are -- here's a good example -- surface lines. Power plants love to be located near their fuel source. And so a coal fire power plant that has a surface line nearby, if you take the coal out from the surface, you get left with a valley. And a practice that I have seen is the valley would be -- there would be a dike that would be constructed just over the

opening of the valley and then that topographic depression -- although I guess not necessarily natural, but you could apply it to a natural valley. You build an embankment across the mouth of that valley and that could be used to settle CCR -- or to accumulate CCR and water so that CCR could settle before it's discharged out the other end.

Does that answer your question?

MS. HORTON: Yes, but there is a man-made element to your example then.

THE WITNESS: Yes, yes. I suppose you could use a natural lake that was nearby to deposit CCR, which would allow for CCR to settle and then be discharged out the other way.

MS. HORTON: Okay. Thank you.

THE HEARING OFFICER: Anything further? Exhibit 44. Petitioner --

MS. GALE: Well, I wanted to move our exhibits into evidence, Mr. Hearing Officer.

THE HEARING OFFICER: Okay.

MS. GALE: So I was going to do them

all, but. So Midwest Generation moves to admit its Exhibits 1, 17 through 23, 26 through 44.

THE HEARING OFFICER: All right. Back up again, Ms. Gale.

MS. GALE: Sorry.

THE HEARING OFFICER: These are -- 17 to 23 are from where?

MS. GALE: 17 to 23 are attached to petition. And if you look at the binder that I gave you, at the front there's an index of the exhibits.

THE HEARING OFFICER: Okay. In this binder here?

MS. GALE: Yes.

THE HEARING OFFICER: 17 through 23.

Mr. --

MS. GALE: And Exhibit 1, sorry.

THE HEARING OFFICER: And Exhibit 1. Okay.

Any objections, Mr. Gunnarson?

MR. GUNNARSON: No. I'm sorry. I didn't know you were waiting. I'm sorry.

THE HEARING OFFICER: Okay.

And then go ahead.

MS. GALE: Yeah. And then exhibits 26 -- so if you turn the page, there's page 2 of the index. 26 -- we'll say 26 through 38 are the exhibits that have previously been incorporated that we did under our motion for incorporation.

I take that back. Exhibit 26 is the potential CCR universe, Exhibit 27 is Mr. Dehlin's expert opinion, and Exhibit 28 is the Illinois EPA invoice. And then Exhibits 29 through 38 are the information that we moved to incorporate from the Sierra Club v. Midwest Generation matter.

THE HEARING OFFICER: I don't have my order. Do you have that offhand?

MS. GALE: The order of what?

THE HEARING OFFICER: My order granting your incorporation.

MS. GALE: Off the top of my head? No, sir. But I can get -- it was last fall. It was at the time -- I can tell you it was based upon a status hearing. It was a status hearing order that you made. Ms. Terranova

had no objection to the incorporation. As part of your status hearing order, you said it would be incorporated. I can get you the date later.

THE HEARING OFFICER: Mr. Gunnarson?

MR. GUNNARSON: No objection.

THE COURT: No objection? And I will like a list of exhibits, please.

MS. GALE: Yes. And then there was one more motion and then the proposal --

THE HEARING OFFICER: Oh, I'm sorry. The 44?

MS. GALE: Yes. We already, I think, admitted -- we moved to admit Exhibit 39, which is the proposed rule, and Exhibit 40, which is the summary of the potential universe of comments for legacy CCRMU. These were discussed by Ms. Shealey yesterday. Any objection? I'm sorry. I should wait. Pausing.

MR. GUNNARSON: No objection.

THE HEARING OFFICER: Thank you.

MS. GALE: And then Exhibit 41, which is Mr. Thomas Dehlin's expert presentation

that was just presented today.

MR. GUNNARSON: No objection.

MS. GALE: We moved and there was offered as proof of Exhibit 42.

Exhibit 43 has already been admitted, which is the Waukegan groundwater data for the monitoring well response to board question No. 5.

And then Exhibit 44, that was presented today. We move for admission, which is the City of Waukegan's 2023 annual water quality report.

MR. GUNNARSON: No objection.

MR. HEARING OFFICER: Thank you. Yeah, I'm going to definitely need a list.

MS. GALE: For sure.

THE HEARING OFFICER: Thank you so much. Let's go off the record for a second.

MR. GUNNARSON: The agency would like to enter into evidence the agency's recommendation and the exhibits that were filed on October 31, '22, and the exhibits attached thereto.

THE HEARING OFFICER: I'm sorry. Your

recommendation --

MR. GUNNARSON: Yes.

THE HEARING OFFICER: -- exhibit is Exhibit what? Just move it in?

MR. GUNNARSON: Yes, please.

MS. GALE: We object, Mr. Hearing Officer.

THE HEARING OFFICER: I'm sorry?

MS. GALE: We have objection to certain of the agency's exhibits.

MR. GUNNARSON: All the ones that we --

MS. GALE: Yeah.

THE HEARING OFFICER: You know what? We're going to go off the record and figure it out because this back and forth isn't working for me. We're off the record.

(Whereupon there was a recess in the proceedings.)

THE HEARING OFFICER: We were off transcript for a bit just talking about a few things. And one of the things is the parties, regarding the post-hearing briefing schedules, they're going to get back to me within five to seven days. But I did set

March 15th, the due date for public comment. We can email or mail the board. We figure the transcript will be due February 29th. So that's the parties' start date for the post-hearing briefing schedule.

And I also wanted to address on February 7th, Midwest filed a third amended petition. And I talked to legal counsel for the agency and they don't plan on filing an amended recommendation. Is that correct Mr. Gunnarson?

MR. GUNNARSON: That is correct.

THE HEARING OFFICER: Okay. And also, the parties are going to reserve their closing arguments for the post-hearing brief. That's it. Did I miss anything? And Ms. Gale is going to send me an exhibit list, and Mr. Gunnarson as well, of what was entered into evidence.

MS. GALE: You didn't move your exhibits in.

MR. GUNNARSON: Well, I was going to say -- well, let me make the revised motion on mine.

THE HEARING OFFICER: Okay.

MR. GUNNARSON: Okay? Since we now have that straightened out.

THE HEARING OFFICER: My bad.

MR. GUNNARSON: Yes, that's fine. We would move into evidence the agency's recommendation in this matter. And the exhibits -- I guess I'll read them off. It might be easier that way.

Exhibit 1. Exhibit 2. Exhibit 3. Exhibit 4. Exhibit 5. Exhibit 13. Exhibit 14. Exhibit 15. Exhibit 16. Exhibit 17. Exhibit 18. Exhibit 19. And Exhibit 20. Exhibit 21. Exhibit 22. Exhibit 23. Exhibit 24. Exhibit 25. Exhibit 26. Exhibit 32. Exhibit 33. Exhibit 34. Exhibit 35. Exhibit 36. Exhibit 38. Exhibit 39. Exhibit 41. Exhibit 45. Exhibit 46. Exhibit 47. Exhibit 48. And Exhibit 49.

MS. GALE: No objection.

THE HEARING OFFICER: Thank you, Ms. Gale. So admitted.

I think that's it, what we had to

say, and we can all go home. And I thank you again for your civility and professionalism. I think we got a lot accomplished in a day and a half and I appreciate it. Safe driving.

MS. GALE: Thank you.

MR. GUNNARSON: Thank you.

THE HEARING OFFICER: We're off the record.

(Off the record at 12:24 p.m.)

CERTIFICATE OF COURT REPORTER - NOTARY PUBLIC

I, Jessica Shines, the officer before whom the foregoing deposition was taken, do hereby certify that said proceedings were electronically recorded by me; and that I am neither counsel for, related to, nor employed by any of the parties to this case and have no interest, financial or otherwise, in its outcome.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 28th day of June, 2024.

Notary Registration No.: 929934
My Commission Expires: 04/12/2025

Jessica Shines
_____

Jessica Shines, Certified Shorthand Reporter, Registered Professional Reporter, and Notary Public for the State of Illinois

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