BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

NOTICE OF FILING

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board a **NOTICE OF FILING** and **FIRST SUPPLEMENT TO IEPA'S PRE-FILED ANSWERS** on behalf of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

Respectfully submitted,

Dated: August 5, 2020

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,

Christine Zeivel
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
(217) 782-5544

Petitioner,

BY: /s/ Christine Zeivel
Christine Zeivel

THIS FILING IS SUBMITTED ELECTRONICALLY

SERVICE LIST

ILLINOIS POLLUTION CONTROL BOARD Don Brown, Clerk Vanessa Horton, Hearing Officer James R. Thompson Center 100 W. Randolph, Suite 11-500 Chicago, IL 60601	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY Christine Zeivel Stefanie Diers 1021 North Grand Avenue East Springfield, IL 62794-9276
ILLINOIS ATTORNEY GENERAL Matt Dunn, Division Chief Environmental Stephen Sylvester, Sr. Asst. Attorney General Kathryn A. Pamenter, Asst. Attorney General 69 W. Washington, Suite 1800 Chicago, IL 60602 Andrew Armstrong, Bureau Chief 500 South Second Street Springfield, Illinois 62706	ILLINOIS DEPARTMENT OF NATURAL RESOURCES Renee Snow, General Counsel Virginia I. Yang, Deputy Counsel Nick San Diego, Staff Attorney Robert G. Mool Paul Mauer – Senior Dam Safety Eng. One Natural Resources Way Springfield IL 62702-1271
PRAIRIE RIVERS NETWORK Kim Knowles Andrew Rehn 1902 Fox Dr., Ste. 6 Champaign, IL 61820	PRAIRIE POWER, INC Alisha Anker, Vice President Regulatory & Market Affairs 3130 Pleasant Runn Springfield, IL 62711
CITY OF SPRINGFIELD Deborah Williams, Regulatory Affairs Director Office of Utilities 800 E. Monroe, 4th Floor Municipal Building East	CHICAGO LEGAL CLINIC, INC. Keith Harley Daryl Grable 211 W. Wacker, Suite 750 Chicago, IL 60606
AMEREN Michael Smallwood 1901 Choteau Ave. St. Louis, MO 63103	MCDERMOTT, WILL & EMERY Mark A. Bilut 227 W. Monroe Street Chicago, IL 60606-5096
ENVIRONMENTAL INTEGRITY PROJECT Abel Russ, Attorney 1000 Vermont, Ave NW, Ste. 1100 Washington, DC 20005	NRG ENERGY, INC. Walter Stone, Vice President 8301 Professional Place, Suite 230 Landover, MD 20785
ILLINOIS ENVIRONMENTAL REGULATORY GROUP Alec M. Davis, Executive Director Kelly Thompson 215 E. Adams St. Springfield, IL 62701	NIJMAN FRANZETTI, LLP Susan M. Franzetti Kristen Laughridge Gale Vincent R. Angermeier 10 S. Lasalle St., Ste. 3600 Chicago, IL 60603
SIERRA CLUB Cynthia Skrukrud Jack Darin Christine Nannicelli 70 E. Lake Street, Ste. 1500 Chicago, IL 60601-7447	SCHIFF HARDIN, LLP Stephen J. Bonebrake Joshua R. More Ryan C. Granholm 233 S. Wacker Drive, Suite 7100 Chicago, IL 60606-6473
HEPLERBROOM, LLC	ENVIRONMENTAL LAW & POLICY CENTER

N. LaDonna Driver Jennifer M. Martin Melissa S. Brown 4340 Acer Grove Drive Springfield, IL 62711	Jeffrey Hammons, Staff Attorney 1440 G. Street NW Washington DC, 20005
EARTHJUSTICE Melissa Legge Mychal Ozaeta Jennifer Cassel Thomas Cmar 311 South Wacker Drive, Suite 311 Chicago, IL 60606	BROWN, HAY, & STEPHENS, LLP Claire A. Manning Anthony D. Schuering 205 S. Fifth Street, Suite 700 Springfield, IL 62705
U.S. EPA, REGION 5 Chris Newman 77 West Jackson Blvd. Chicago, IL 60604-3590	SIERRA CLUB Faith Bugel, Attorney 1004 Mohawk Wilmette, IL 60091
Gibson Dunn and Crutcher LLP Michael L. Raiff 2001 Ross Avenue Suite 2100 Dallas, IL 75201	

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R 2020-019
STANDARDS FOR THE DISPOSAL	)	
OF COAL COMBUSTION RESIDUALS	)	(Rulemaking - Water)
IN SURFACE IMPOUNDMENTS:	)	
PROPOSED NEW 35 ILL. ADM.	)	
CODE 845	)	

FIRST SUPPLEMENT TO ILLINOIS EPA'S PRE-FILED ANSWERS

NOW COMES the Illinois Environmental Protection Agency (Illinois EPA or Agency), by and through one if its attorneys, and submits the following information with respect to this first supplement to its pre-filed answers.

1. On March 30, 2020, the Illinois EPA filed a rulemaking, proposing new rules at 35 Ill. Adm. Code 845 concerning coal combustion residual surface impoundments at power generating facilities in the State.

2. Public Act 101-171, effective July 30, 2019, amended the Illinois Environmental Protection Act, by among other things, adding a new Section 22.59 (415 ILCS 5/22.59). Public Act 101-171 includes a rulemaking mandate in Section 22.59(g) which directs the Board to adopt rules "establishing construction permit requirements, operating permit requirements, design standards, reporting, financial assurance, and closure and post-closure care requirements for CCR surface impoundments." 415 ICLS 5/22.59(g). The Board is required is adopt new rules for 35 Ill. Adm. Code part 845 by March 30, 2021.

3. The Agency timely filed pre-filed testimony for eight witnesses.

4. Based on the pre-filed testimony, Illinois EPA received over 1000 questions counting subparts.

5. On June 30, 2020, the Agency asked that it be granted until August 3, 2020 to respond to the pre-filed questions.

6. On July 14, 2019, the hearing officer granted the Agency's request.

7. On August 3, 2020, the Agency filed Pre-Filed Answers to Little Village Environmental Justice Organization, ELPC, Prairie Rivers Network and Sierra Club, CWLP, Illinois Environmental Regulatory Group, Ameren, and the Board.

8. Since receiving all the pre-filed the questions, Agency staff has been working diligently to respond to all the pre-filed questions. However, despite the extra time granted the Agency was not able to prepare final answers by the August 3, 2020 filing deadline for Dynegy and Midwest Generation.

9. The Agency is today filing responses to all of Midwest Generation's pre-filed questions and responses to Dynegy's pre-filed questions, numbers 1-84.

10. The Agency will continue to work to address the remaining questions raised by Dynegy and hopes to file written answers before the first hearing. If that is not possible, the Agency will be prepared to address those pre-filed questions at the August hearing.

11. It should be noted that if a question was directed at a witness and the Agency answered it as a panel, the answer is provided as: "Agency Response".

MIDWEST GENERATION

I. GENERAL QUESTIONS TO THE AGENCY WITNESSES

Section 845.100 Scope and Purpose

1. What is the purpose of the second sentence in Section 845.100(a)?

Response: This is language which is based on Part 257.1(a)(1) to distinguish between CCR surface impoundments and open dumps.

2. Is it correct that section 845.100(e) makes these rules applicable only to electric utilities and independent power producers?

Response: Yes.

3. Is it the Agency's view that electric utilities and independent power producers are the only parties who may have coal ash accumulations in impoundments on their properties? If not, why is Part 845 limited to electric utilities and independent power producers?

Response: No, Section 845.100(e) is consistent with Part 257. According to USEPA in its Federal Registry entry for 40 CFR Part 257 located at 80 Fed. Reg. 21340, (Apr. 17, 2015), industries using coal to generate electricity and heat for their own use consumed less than one percent of the coal burned. Hence, these industries would produce less than one percent of the CCR generated. Further, Section 22.59(a)(3) states as a finding of the General Assembly that the electrical generating industry has caused groundwater contamination at active and inactive plants throughout Illinois. Based on this information, as drafted, Part 845 would regulate approximately 99% of the CCR generated and is consistent with the General Assembly's findings. Further, Section 22.59(g)(1) of the Act requires that the rules adopted pursuant to Section 22.59(g) be as protective and comprehensive as Subpart D of 40 CFR 257 governing CCR surface impoundments. The Agency's position is that the same universe of CCR surface impoundments is intended to be regulated by Part 845.

Section 845.130 Surface Impoundment Identification

4. The Agency has identified CCR surface impoundments in Illinois and has assigned identification numbers to the CCR surface impoundments it has identified. What is the authority the Agency is relying upon to identify the CCR surface impoundments?

Response: The Agency's authority to permit water treatment units was used to identify CCR surface impoundments.

5. What was the Agency's process for identifying the CCR surface

impoundments and assigning identification numbers?

Response: The Agency utilized permit records and publicly available information. to identify and number the CCR surface impoundments.

6. Did the Agency conduct any outreach to the owners/operators to identify the CCR surface impoundments to assign the identification numbers? If so, please describe the outreach.

Response: No.

7. If an owner/operator disagrees with the Illinois EPA's identification of CCR surface impoundments, what are the owner/operator's options for seeking to challenge or obtain relief from the Agency's decision?

Response: Owner or operators will need to determine their options.

8. Does the Agency consider its identification of a CCR surface impoundment a final Agency decision?

Response: Yes.

9. What is the timeframe or due date for an owner/operator to install a marker?

Response: A time frame to install a marker was not specified in part 845. However, initial operating permit applications for all CCR surface impoundments must include evidence that the permanent markers have been installed.

10. Certain of the CCR surface impoundments have a federal CCR rule marker. Would the federal CCR rule markers satisfy the identification requirement here?

Response: It would if it contains the following information: the CCR identification number assigned by the Agency, the name of the impoundment, and the name of the owner or operator.

II. QUESTIONS FOR DARIN LeCRONE

11. You state on page 3 of your testimony that the draft permit, public notice and participation procedures are modeled after the NPDES program. As the NPDES program does not require two public meetings, why is the Agency proposing to require two public meetings instead of one as provided for in the NPDES program regulations? Why are the public notification requirements for the regulated entities more stringent than those required of the Agency in this program and in the NPDES program?

Response: The proposed permitting process is modeled after the existing NPDES program, but you are correct that the NPDES program does not include the two pre-application public meetings. 40 CFR 257 requires a public meeting to discuss corrective action alternatives.

In order to be at least as protective as Part 257, the Agency proposed two public meetings, one of which is to be held after 5:00 in order to accommodate the public.

Section 845.200 Permit Requirements and Standards of Issuance

12. In Section 845.200(a)(1), what is the Agency's definition of a "mitigation facility?"

Response: The intent of this section was to make it understood that construction permit requirements applied not only to the construction, installation, or modification of a CCR surface impoundment, but also to construction related to any treatment or any other related construction activities. This could include activities such as retrofits, pump and treat of impacted groundwater, construction of treatment wetlands or other construction activities related to a corrective action which is not the construction, installation or modification of the affected CCR surface impoundment itself.

13. Section 845.200(a)(2) states an existing unit cannot operate without an operating permit and refers to Section 845.230(d). However, section 845.230(d) does not address the temporal gap from the time the proposed rule is promulgated to the date of the permit application submission in 2021. Please confirm that the Agency will not consider an owner/operator out of compliance for not having submitted an operating permit application immediately upon promulgation of the CCR rule.

Response: Section 845,200(a)(2) states: "Except as provided in Section 845.230(d), no person shall operate a CCR surface impoundment without an operating permit issued by the Agency pursuant to this Part. For the purposes of this Part, a CCR surface impoundment commences operation upon initial receipt of CCR." Section 845.230(d) defines when applications for such permits are due. Assuming the final rule is not adopted until March 2021, the initial operating permit applications are due no later than September 30, 2021. This provides for a lag time between when the rule becomes final, and when those first operating permit applications are due pursuant to the rule.

Section 845.210 General Provisions

14. Did the Agency intentionally exclude the option to submit a permit application by e-mail and if so, why? If the exclusion was not intentional, does the Agency have any objection to allowing permit applications to be submitted by e-mail?

Response: The Agency intentionally did not include the e-mail submittal of permit applications. Current wastewater permitting programs require the submittal of applications with original signatures, which requires the submittal of a hard copy of the permit applications.

15. Section 845.210(e) states that the Agency's final action shall be deemed to have taken place on the post marked date that such notice is mailed. What is the Agency's basis for making the final action date the date the decision is placed in the mail and not the date it is served on the owner/operator? How is Section 845.210(e) consistent with Section 40 of the Act which states that if the Agency denies a permit "the applicant may, within 35 days after the date on which the Agency served its decision on the

applicant," appeal the decision? 415 ILCS 5/40.

Response: Please see Response to Question No. 29.

Section 845.220 Construction Permits

16. Please confirm that an existing groundwater monitoring program will be acceptable to the Agency as part of the construction permit application.

Response: The Agency can accept an existing monitoring program, but can require modifications to groundwater monitoring programs to meet the requirements of Part 845, Subpart F.

17. What was the basis for the Agency limiting a construction permit to five years for closure?

Response: The five-year permit term is typical of Agency permitting programs, such as the existing NPDES and state operating permit programs under 35 Ill. Adm. Code Part 309. Under 35 Ill. Adm. Code 309.242, construction for new sewers and wastewater sources must be completed in two years, and construction for new treatment works and pretreatment works must be completed in three years. The Agency recognized the potential complexity of construction related to closure or retrofit of a CCR surface impoundment and is proposing in Section 845.220(f)(2) a five-year term for these construction permits, which may be renewed in two-year increments.

18. Section 845.700 requires that construction permit applications for Category 1-5 CCR surface impoundments be submitted by January 1, 2022. Section 845.240 requires at least two public meetings 30 days in advance, shortening the time to prepare an application by at least five weeks (i.e. 30 days for the public meetings plus additional time to schedule the meetings). The construction permit application must include the engineered design of a closure or retrofit project, final closure and post-closure plans, and groundwater modeling.[1]

a) Please provide the basis for the Agency's determination that a permit applicant will be able to complete all of the tasks that are required to be conducted and submitted by January 1, 2022?

Response: The Agency chose a date of January 1, 2022 which would allow nine months for submittal, after the March 31, 2021 promulgation date of the regulation required by the legislature. The Agency acknowledges that some of the timeframes are tight within the rule. The timeframes placed upon the Agency in parts of the rule are also tight. However, the Agency believes the timeframes laid out in the rule can be managed. Section 22.59 of the Act requires meaningful public involvement. The Agency believes public meetings are needed here for meaningful public involvement. Additionally, Part 257 already requires the closure of CCR surface impoundments that don't meet location restrictions or do not have a Part 257 compliant composite liners and corrective action for

[1] Because this question is related to the Required Closure or Retrofit of CCR Surface Impoundments and Permitting, MWG has asked this question of Darin LeCrone and Amy Zimmer. MWG leaves it to the Agency's discretion which witness will respond to this question.

exceedances of GWPS. Owners and operators should be aware of these requirements and should already be collecting and organizing site specific data for required closure and corrective action.

b) Would the Agency consider allowing an extension if good cause were given? If so, would the Agency support revising this section to allow for extensions where good cause is shown?

Response: The Agency does not support an extension of the due date for applications filed pursuant to the schedule in Section 845.700(h). These due dates allow 9 months for Category 1-4 impoundments, 15 months for Category 5 impoundments, and 27 months for Category 6 and 7 impoundments. Category's 1 through 4 represent those with the highest likelihood of impacts to public health or the environment.

19. What is the Agency's basis to limit the signatory of the construction permit application to a qualified professional engineer? Would the Agency accept a revision to this section which also allows a qualified geologist and/or hydrogeologist to certify?

Response: In order to be consistent with existing Bureau of Water permitting programs, and to ensure compliance with the Illinois Professional Engineering Practice Act (68 Ill. Adm. Code Part 1380), applications for construction permits must include the signature and seal of an Illinois Licensed Professional Engineer.

Section 845.230 Operating Permit

20. Similar to the question above, what is the Agency's basis to limit the certification that the composite liner or the alternative liner and the leachate collection system to a qualified professional engineer?

Response: As with question 19 above, the primary purpose was to ensure compliance with the Illinois Professional Engineering Practice Act of 1989, as well as to be consistent with other permit application requirements.

21. In Section 845.230(a)(12), please confirm that the existing groundwater monitoring program and sampling data may be used to satisfy the groundwater monitoring program.

Response: The Agency can accept an existing monitoring program, but can require modifications to groundwater monitoring programs to meet the requirements of Part 845.

22. What was the basis for the Agency limiting an operating permit's duration to five years?

Response: To be consistent with other existing permitting programs. The NPDES permits are issued with a five-year term, and most state operating permits have a five-year term as well. A five-year permit cycle allows the Agency to review facility operations on a regular basis, and adjust permit conditions, monitoring, or reporting requirements as necessary to reflect current operating conditions.

Section 845.240 Pre-Application Public Notification and Public Meeting

23. What is the Agency's basis for requiring a permit applicant to wait 30 days after the date of the public meeting before it may submit the permit application?

Response: The concept of holding a meeting 30-days prior to submittal of an application comes from 40 CFR 257.96, which requires an owner/operator to discuss the results of the corrective measures assessment at least 30 days prior to the selection of a remedy in a public meeting with interested and affected parties. In adopting a state permitting program, the state program must be at least as protective as the Federal Regulations. The State program equivalent of 30 days prior to selecting a remedy, would be 30 days prior to submittal of an application. This allows for meaningful public participation in the process, and allows for the consideration of new information which may result from the meeting, or for revisions to plans or an application if applicable, following the public meeting.

24. What is the Agency's basis for requiring hand or mail delivery to all residents within a one-mile radius of a facility boundary?

Response: Groundwater modeling of conservative inorganic contaminants which may also be found in CCR has predicted that, given enough time, migration over several thousand feet under certain hydrogeologic conditions is possible. Mail or hand delivery will ensure that those closest to the impoundment will be aware of activities which may affect nearby residents.

a) How did the Agency decide upon the radius of one mile?

Response: Based on the location of the known CCR surface impoundments, there is typically a hydrologic divide within 1 mile, which would limit shallow groundwater migration.

b) What scientific studies or support did the Agency rely upon to show that residents up to a mile away from a facility are potentially impacted by construction at or operation of a CCR surface impoundment at a facility?

Response: Please see Responses 24(a) and (b).

25. What is the Agency's basis for requiring notice posted in conspicuous locations throughout villages, towns, or cities within 10 miles?

Response: According to the National Consumer Spending Summary, 83% of consumers live in Urban areas and 93.2% travel 20 minutes or less to make their daily purchases. At a 30-mph speed, 20 minutes represents approximately 10 miles.
https://cdn2.hubspot.net/hubfs/263750/Access_Consumer_Spend_Study_2016.pdf

a) What is the Agency's definition of "conspicuous location?"

Response: The Agency has not a defined conspicuous location, but it refers to those areas most where such a posting would be most likely to be seen by the general public.

b) How did the Agency decide upon the radius of 10 miles?

Response: Please see Response 25.

c) What scientific studies or support did the Agency rely upon to show that residents up to 10 miles away from a facility are potentially impacted by construction at or operation of a CCR surface impoundment at a facility?

Response: The postings at 10-miles was intended to canvas an area such that residents who may be impacted by a CCR surface impoundment are made aware of the public meetings, based on typical traveling distances for daily purchases. See also the Response 25.

d) In Section 845.260(b)(3), the Agency is only required to mail a notice to the clerk of the nearest city, town or village requesting further posting. What is the Agency's basis for requiring the additional notice procedures by the owner/operator described in Section 845.240?

Response: The Agency is required to mail a notice to the clerk requesting further posting in conspicuous locations; however, there is no requirement or ability for the Agency to ensure that the clerk has done so. The additional notice procedures required of the owner/operator provide additional likelihood that such postings do occur and the public is notified.

26. Section 845.240(c) requires when a proposed construction project is located "in an area with a significant proportion of non-English speaking residents," an owner/operator must circulate the notification in both English and the appropriate non-English language.

a) What is the Agency's definition of "area"?

Response: The 10-mile radius of the facility in which notices are to be posted.

b) What is the Agency's definition of "significant proportion?"

Response: The Agency doesn't have a definition of significant proportion.

Section 845.250 Tentative Determination and Draft Permit

27. Please confirm that a permit applicant will have an opportunity to answer questions or provide further information to the Agency if the Agency's tentative determination is to deny the permit.

Response: Yes, the applicant will have the opportunity to provide further information if the Agency' tentative determination is to deny the permit. As with the existing NPDES permitting program, the applicant will receive a first draft of the Agency's tentative decision, and will have a chance to respond to that draft prior to public notice.

28. If the Agency will not provide an opportunity as described above, please provide the basis for not allowing the applicant this opportunity.

Response: See response to number 27.

Section 845.270 Final Permit Determination and Appeal

29. Section 845.270(e) refers to Section 845.210(e) for filing an appeal of the Agency's permit determination. Please see MWGen's question above regarding Section 845.210(e) and how it comports with Section 40 of the Act.

Response: In light of the questioning, the Agency acknowledges that there is an inconsistency between Section 845.270(e) and Section 40 of the Act. In light of the question, the Agency suggests the following revision to Section 845.270(e):

"All appeals must be filed with the Board within 35 days after the final action is served on the applicant."

III. QUESTIONS FOR WILLIAM E. BUSCHER

Section 845.420: Leachate Collection and Removal System

30. The term "leachate" is not defined in the proposed rule. How does the Illinois EPA define leachate as it pertains to a pond that contains CCR transport water, CCR contact water, and precipitation?

Response: Leachate refers water that has been in contact with CCR.

31. What is the purpose of requiring the leachate collection system above the liner?

Response: The purpose of requiring the leachate collection system above the liner **is** to better protect groundwater resources by providing the ability to minimize head (height of the water column above the liner material). The leachate collections system provides the owner or operator the ability to reduce the amount of head on the liner.

Typically, leachate collection systems are installed below or in between two liner systems – won't the impounded water just recirculate in this proposed design?

Response: The degree to which water recirculates will be dependent upon how the CCR impoundment and the leachate collection system are operated.

32. Based on the Statement of Reasons, Part IV ("section-by-section summary of the Illinois EPA's proposal"), Subpart D: Design Criteria, Section 845.420: Leachate Collection and Removal System, the Illinois EPA states: "The system is similar to leachate collection systems required for solid waste landfills." How is typical CCR transport water (which can be discharged into public waterways under certain conditions in the proposed US EPA ELG Rule) similar to or different than leachate from a typical solid waste landfill?

Response: The typical CCR transport water is similar to leachate from a typical solid waste landfill containing CCR due to both liquids having the potential to contaminate groundwater if the liquid migrates through the liner of the impoundment or landfill. The typical CCR transport water is different from leachate from a typical solid waste landfill due to the potential depth of the liquids in a CCR impoundment. The saturated thickness of material in a CCR impoundment is specific to the design of the CCR impoundment and may be considerably greater than the maximum allowable saturated thickness in a landfill.

33. On page 2 of your testimony you state, "The system will reduce the head (depth of water) on the CCR liner system." Considering the following items, how does the mandated leachate collection and removal system reduce the head on the liner?

- **The proposed rule does not mandate a maximum allowed head in the drainage layer.**
- **The proposed rule does not mandate a minimum pump capacity to remove the waters collected in the drainage layer.**
- **The proposed rule does not include an upper flow-restricting layer that would reduce the flow into the collection system. Thus, if the pond contains free water, as ponds are designed, and the pump system is exceeded by the inflow of water into the pond, the head on the liner would be approximately equal to the depth of water in the pond.**

Response: The overall performance of the leachate collection system over the lifetime of the CCR impoundment would be based upon the most efficient operation of the system. The purpose of the leachate collection system is to minimize head on the liner. Allowed head on the liner and pump capacity to remove the water from the CCR impoundment are very important design considerations which would need to be carefully considered. The regulation has been written to allow flexibility in the design and operation of the CCR impoundment with the goal of minimizing head and the potential for the migration of fluids from the CCR impoundment.

34. In December 2014 the US EPA published its *Human and Ecological Risk Assessment of Coal Combustion Residuals* (Regulation Identifier Number: 2050-AE81). The purpose of this work was to characterize the risks that may result from the current disposal practices for CCR and provide a scientific basis for the development of regulations necessary to protect human health and the environment under the Resource Conservation and Recovery Act (RCRA). One of the conclusions from this assessment was, "Composite-lined units were found to be the most protective disposal practice, resulting in risks far below all criteria identified in this risk assessment." Accordingly, the final US EPA CCR rule that was in part based on this risk assessment requires composite liners for new CCR surface impoundments. However, the final federal rule does not require such impoundments to have "leachate" collection and removal systems.

a) What was the basis for the Illinois EPA's determination that a more rigorous standard was appropriate than that required by the US EPA?

Response: The basis for the Agency's determination is the recognition of the fundamental

flaw in the Part 257 design parameters for CCR impoundments which fails to address the head on the composite liner of the CCR impoundment. This design fails to maximize the protection of groundwater resources by providing the ability to minimize head above the CCR impoundment composite liner.

b) Does the Agency have any scientific studies or real-life examples that support the conclusion that water is seeping through a composite liner system such that the head must be reduced? If so, please identify the studies or examples.

Response: The potential for the movement of fluids through a liner material is directly related to the amount of head (height of the water column) above that material. As expertise with waste disposal has evolved the reduction in head above liner material has been determined to be a major factor in landfill liner performance to minimize leakage. 40 CFR 257.70(d) requires that CCR impoundments and CCR landfills be constructed using the same the composite liner systems. For a real-life example that supports the conclusion that water can seep through composite liners please refer to 40 CFR 257.70 (d) which requires CCR landfills to be constructed with a leachate collection and removal system.

35. Section 845.420(a)(2) of the proposed rule requires new CCR surface impoundments to have a filter layer above the leachate collection system that has a hydraulic conductivity of no less than $1x10^{-5}$ cm/sec. Yet the rule does not require a thickness or filtration criteria. Does this mean that anything more permeable (e.g. geotextiles, geogrids, etc.) can be utilized?

Response: The purpose of the filter material is to minimize the amount of CCR entering the leachate collection system which could cause the system to become clogged with CCR. Flexibility on determining the type of filter material to use has been provided.

36. Section 845.420(a)(7)(A) specifies that the leachate collected by the leachate collection and removal system be pumped or otherwise conveyed out of the CCR surface impoundment. This is interpreted to mean that the leachate is either pumped or that it flows out of the impoundment, and that, if pumped, it can be pumped directly back into the impoundment, similar to standard practice for US EPA Subtitle C dual liner system design. Is pumping the fluids removed back into the CCR Impoundment allowed?

Response: Yes.

a) If we assume a thin protective layer of crushed stone that is somewhat more permeable than the filter layer, it will not limit the flow. Thus, the filter layer will be the flow limiting layer for flow into the leachate collection layer. Considering a filter layer that is 6-inches (0.5-feet) thick with the minimum hydraulic conductivity permitted by the Illinois EPA, the flow velocity for a 20 ft deep impoundment is calculated to be 0.05 ft/hr. If the CCR surface impoundment is 20 acres in area, the total flow into the leachate collection and removal system is 5,400 gal/min or 7.8 million gal/day.

Because the hydraulic conductivity used in this example is the lowest allowed by the proposed rule with a thickness of 6 inches, the flow could be significantly higher with more permeable and/or thinner filter materials. If the rule is modified to require

removal of this water to prevent water from standing on the liner, this significant flow of water warrants further consideration. If it is not allowed to be returned to the impoundment, most coal fired power plants cannot consumptively utilize this volume of water. In light of the proposed US EPA ELG rule, how does Illinois EPA anticipate power plant operators will dispose of this quantity of water?

Response: The flow into the leachate collection system is allowed to be returned to the impoundment.

37. Section 845.420(a)(8) of the proposed rule requires new CCR surface impoundments have a protective layer above the filter layer or some other means of deflecting the force of CCR pumped into the CCR surface impoundment. What does the Illinois EPA intend this layer to be?

a) Would geotextile satisfy the requirement for protection and filtration?

Response: Yes.

b) Because one of the most effective energy dissipators for flows into standing water in a surface impoundment is the impounded water itself, it appears the agency intends for CCR surface impoundments to be dry. Does the Illinois EPA intend that future CCR surface impoundments contain no or minimal standing water?

Response: The amount of standing water in a CCR impoundment is an operational parameter which the owner or operator needs to consider in the design of the impoundment.

38. Based on the requirements of the proposed rule we have graphically depicted (see attached Figure 1) our understanding of the rule. Is this understanding correct?

Response: Yes.

39. If the water levels in a CCR surface impoundment are reduced, then the CCR will dry out and there is a higher likelihood of causing air emissions. This will cause significantly greater fugitive dust control requirements than are typically needed for a surface impoundment. Has the Agency considered that the reduction of water in a pond will impact the potential for airborne CCR and in operation and maintenance requirements for utilities?

Response: The amount of standing water in a CCR impoundment is an operational consideration which the owner or operator needs consider in the design and operation of the impoundment.

40. As required by the US EPA CCR Rule, the groundwater monitoring wells installed at the edge of waste (as required by 40 CFR 257.91) act as an early leak detection system. Moreover, corrective measures would be implemented in accordance with 40 CFR 257.98 to identify the source of the leak, remedy the leak, prevent future leaks, and restore the area(s) impacted by the leak. Early detection and remedy of such a leak (i.e., when the impacted water is at the edge of the waste)

would protect offsite groundwater quality. Because there is an early leak detection system through the groundwater monitoring wells, why is the Agency requiring a leachate collection system?

Response: The groundwater monitoring wells installed at the edge of waste (as required by 40 CFR 257.91) which have been referred to as "an early leak detection system" are also required for CCR landfills under 40 CFR 257.91. The leak detection system identifies a problem however it does not remedy the problem. A leachate collection and removal system is a proactive means of protecting groundwater quality as opposed to the reactive approach of detecting and remediating groundwater contamination after it has out migrated out of the CCR surface impoundment. In addition, for a real-life example that supports the conclusion that water can seep through composite liners please refer to 40 CFR 257.70(d) which requires CCR landfills to be constructed with a leachate collection and removal system.

41. What other jurisdictions are you aware of that require a leachate collection and removal system above a composite liner system for non-hazardous waste impoundments where only one such liner is provided?

Response: The potential for the movement of fluids through a liner material is directly related to the amount of head (height of the water column above the liner material). above the material. As expertise with waste disposal has evolved the reduction in head above liner material has been determined to be a major factor in the performance of landfill liners minimizing leakage. 40 CFR 257.70(d) requires that CCR impoundments and CCR landfills be constructed using the same the composite liner systems. For a real-life example of a jurisdiction requiring a leachate collection and removal system above a composite liner system please refer to 40 CFR 257.70(d) which requires CCR landfills to be constructed with a leachate collection and removal system.

Section 845.450: Structural Stability Assessment

42. What is the Agency's basis to require the structural stability assessment to be conducted annually?

Response: These assessments would then be completed on the same schedule as the annual inspections required by Section 845.540 and could take into account any changes in conditions revealed by the annual inspections.

43. Would the Agency consider the annual Inspection by the Professional Engineer required by Section 845.540(b) to cover this assessment? If not, why?

Response: The annual Inspection by the Professional Engineer required by Section 845.540(b) could identify any changes of conditions which would require the assessment to be updated.

Section 845.460: Safety Factor Assessment

44. What is the Agency's basis to require the safety factor assessment to be conducted annually?

Response: These assessments would then be completed on the same schedule as the annual inspections required by Section 845.540 and could take into account any changes in conditions revealed by the annual inspections.

45. Would the Agency consider the annual Inspection by the Professional Engineer required by Section 845.540(b) to cover this assessment? If not, why?

Response: The annual Inspection by the Professional Engineer required by Section 845.540(b) could identify any changes of conditions which would require the assessment to be updated.

Section 845.510: Hydrologic and Hydraulic Capacity Requirements for CCR Surface Impoundments

46. What is the Agency's basis to require the inflow flood control system certifications to be conducted annually?

Response: The purpose of requiring these plans to be reassessed annually is to make sure the there are no changes in the operation of the impoundment which would cause the impoundment to be overtopped.

47. How often does the Agency believe that conditions change that would substantially affect the written plan?

Response: The Agency does not expect conditions to change often.

48. Would the Agency consider the Annual Inspection by the Professional Engineer required by Section 845.540(b) to cover this assessment? If not, why?

Response: The annual Inspection by the Professional Engineer required by Section 845.540(b) could identify any changes of conditions which would require the inflow design flood control system to be updated.

IV. QUESTIONS FOR LAUREN MARTIN

Section 845.500 Air Criteria

49. The fugitive dust control plan offers examples of control measures to minimize CCR from becoming airborne, but does not include relying upon the water in the CCR surface impoundment. Is the Agency foreclosing the availability to rely upon the water used to sluice the ash into the basin to prevent potential fugitive dust emissions?

Response: No.

50. In Section 845.500(b), please confirm that the federal regulations referenced are examples for an owner/operator to look to.

Response: First and foremost, nothing in 845, 257 or SB 9 negates existing state and federal regulations for worker safety. As a HAZWOPPER certified and 30 OSHA Safety trained former Site Supervisor for RCRA related construction and general site work, the federal regulations referenced are ones in which the companies need to prove aren't applicable. According to the USEPA Coal Combustion Residuals basic information fact sheet (https://www.epa.gov/coalash/coal-ash-basics, accessed June 25, 2020), silica (29 CFR 1910.1053) is a major constituent of fly ash. Additionally, arsenic (29 CFR 1910.1018), beryllium (29 CFR 1910.1024), lead (29 CFR 1910.1925), and cadmium (29 CFR 1910.1027) have been documented to exist in CCR, namely fly ash. Thus, the onus to prove that there is no hazard existing to the workers is on the owner/operator. These are not examples, these are the federal regulations that were adopted by Illinois OSHA in whole and should be treated as such. The Agency references these specific regulations in 845.500(b) because it is extremely important that owners/operators ensure safe work spaces for all of their onsite personnel for all operations at the site which is already covered by OSHA regulations and do not need to be rewritten in 845.

Section 845.530 Safety & Health Plan

51. Please identify the information the Agency relied upon to require a Safety and Health Plan for operation of a CCR surface impoundment?

Response: The Agency relies on the fact that Part 257 is an amendment to RCRA, thus all of 29 CFR 1910.120 and 29 CFR 1926.65 are applicable to general site work and construction work, respectively, at a CCR surface impoundment. 29 CFR 1910.120(b) and 29 CFR 1926.65(b)(1)(i) require a written Safety and Health Program for the site work. Details of the safety and health program are defined therein.

52. On page 5, you state that safety and health plans are required under 29 CFR 1910.120; however, that citation references hazardous waste operations and emergency response. Is the Agency suggesting that CCR surface impoundments are uncontrolled hazardous waste sites? If not, what is the Agency's basis for relying upon safety and health plans for hazardous waste operations for a material that is not a hazardous waste?

Response: 29 CFR 1910.120(a)(1)(ii) states that corrective actions involving clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq). The Agency interprets this to include CCR surface impoundment operations and corrective action, as the WIIN Act was an amendment to RCRA and all portions of Part 257 and 845 fall under federal RCRA regulation.

53. Both 29 CFR 1910.120(b)(1)(ii)(C) and 29 CFR 1926.65(b)(1)(ii)(C) state "The written safety and health program shall incorporate the following…a site-specific safety and health plan which need not repeat the employer's standard operating procedures…" Does the Agency agree that a separate safety and health plan (as required by 845.530) is not required if all parts are covered in the facility's standard operating procedures? If

not, what is the Agency's basis for a facility to duplicate the safety and health plans facilities are operating under?

Response: The Agency is not interested in the format of the safety and health plan. The owner or operator can choose either method of having a safety program as long as the applicable safety and health plan or standard operating procedures are included in the operating record and posted to the owner/operator's publicly accessible website.

54. What is the Agency's basis to require the Safety and Health Plans to be updated annually?

Response: The Agency recognizes that lessons learned or deficiencies identified by employees [29 CFR 1910.120(b)(4)(is)], new data on constituents within the CCR, new hazard identification and mitigation methods. , and new regulations will be promulgated for worker safety, all of which will need to be included in the safety and health plan. Ideally the facility will update per OSHA regulations and in real time for these items. However, the Agency is asking that the facility Site Safety and Health Supervisor [29 CFR 1910.120(b)(2)(i)(B)] verify compliance on an annual basis.

V. QUESTIONS FOR LYNN E. DUNAWAY

Section 845.600 Groundwater Protection Standards

55. On pages 4-5 of your written testimony, you compare the proposed groundwater monitoring program under the Rule to the Federal CCR groundwater monitoring program. Under the proposed groundwater program numerical standards are established and if there is a single statistical exceedance, even for a general indicator parameter such as Total Dissolved Solids (TDS) or pH, the need for potential corrective action is triggered. Under the Federal two-tiered monitoring programs, if there is a potential statistically significant increase (SSI) identified during the "detection" monitoring which would include general indicator parameters, an "assessment" monitoring program is triggered to allow a more detailed evaluation of the groundwater quality conditions to determine whether the initial single SSI is truly associated with a release from the regulated unit that will require a corrective measure.

a) Considering that most science and engineering based decisions are not based on a single occurrence or data point, what is the technical basis and rationale for the Agency's proposal to trigger corrective action following one data point with one confirmatory sample?

Response**:** One data point with a confirmatory sample is two data points. The TDS and pH GWPS are proposed at the same concentration as the Part 620 standards for those constituents. Part 620 does not require a resample, nor does Part 257 require a resample prior to the initiation of corrective action. As an alternative to corrective action, the owner or operator has the option of providing an alternative source demonstration pursuant to Section 845.650(d)(4).

b) Please identify a scientific study or citation for your following statement on page 4 of your written testimony: "When exceedances are common, the tiered monitoring approach is unnecessary since there is a high degree of likelihood that the groundwater monitoring will show exceedances of multiple parameters."

Response: One data point with a confirmatory sample is two data points. The TDS and pH GWPS are proposed at the same concentration as the Part 620 standards for those constituents. Part 620 does not require a resample, nor does Part 257 require a resample prior to the initiation of corrective action. As an alternative to corrective action, the owner or operator has the option of providing an alternative source demonstration pursuant to Section 845.650(d)(4).

56. Please confirm that Paragraph 2 of page 5 of your testimony is regarding Section 845.600(a)(2).

Response: The second paragraph on Page 5 is referring to Section 845.600(a)(1) and (2), depending on the particular statement in question.

57. In Paragraph 2 of page 5 of your written testimony, you state: "This approach makes it clear that concentrations in excess of the GWPS, in downgradient wells, do not need to have further increases in their current concentrations, to initiate corrective action…" Based on what justification would the IEPA require corrective action under this Rule (which addresses potential releases from a regulated unit) if background water quality concentrations in the upgradient wells are also above 845.600(a)(1) and above the concentrations in the noted downgradient wells?

Response: If constituent concentrations in up gradient wells are above the GWPS of Section 845.600(a)(1), then a statistically derived concentration for that particular constituent would be the GWPS. If the down gradient wells demonstrate an exceedence of that statistically derived concentration, and is confirmed by a resample, corrective action or an alternative source demonstration would be required.

58. Please explain your statement in the same paragraph that "absolute numerical concentration also forestalls the application of different statistical methods which may result in a change to the trigger levels for either the initiation of or termination of corrective action."

Response: This statement is in reference to the use of numerical GWPS for Boron, Chloride, pH, Sulfate and Total Dissolved Solids, instead of the statistically derived background GWPS required by Part 257. Appropriate statistical methods can change as the size of the data set increases.

59. On Page 6 of your testimony, you state that Part 620 is not available for any constituents with groundwater protection standards subject the Proposed Rule. Groundwater Management Zones ("GMZs") are provided for in Part 620 and their use is a commonly accepted practice in support of natural attenuation monitoring and managing residual groundwater impacts after the completion of an active portion of remedy. As written, the Rule appears to assume that once the active remedy (e.g., removal of CCR) is completed then the groundwater quality across the monitoring network will automatically

be below standard.

a) Many of the CCR surface impoundments in Illinois have GMZs established pursuant to corrective actions already taken. What is the Agency's position on the continued validity of GMZs that it has already approved?

Response: Part 620 allows the establishment of GMZs, subject to an Agency approved corrective action. By their nature, corrective actions are site specific. Like any other final determination made by the Agency, GMZs are subject to Board review. The Agency's position is that any GMZ which the Board has not determined to be invalid, remains in effect pursuant to Part 620.

b) Please confirm that the Agency agrees that monitored natural attenuation is an available remedy, which is a long process by its nature.

Response: Monitored natural attenuation is an available remedy subject to the requirements of Section 845.660, for CCR surface impoundments at utilities and independent power producers. However, the length of time required to complete monitored natural attenuation is a site specific.

Section 845.610 General Requirements

60. The Draft Rule specifies that all groundwater monitoring data and associated interpretation and reporting must be completed and submitted within 60-days of sample collection.

a) What was the Agency's basis for determining that 60 days from sample collection was a reasonable amount of time to submit the monitoring data?

Response: Part 845 requires, consistent with Part 257, that the assessment of corrective measures begin within 90 days of an exceedence of a GWPS. The Agency selected 60 days to allow owners and operators some time to resample and make an alternative source demonstration prior to the initiation of the corrective action process.

b) Did Illinois EPA consider that standard analytical turnaround times for radium analyses (which is one of the required analytical parameters) is generally in excess of 30 days?

Response: The Agency is aware that time frames are tight. They are however consistent with Part 257.

c) Is this 60-day period intended to include potential verification resampling that may be required by the selected statistical method for the site?

Response: Yes.

61. Has the IEPA considered making the submittal based on "30-days from receipt of all data" rather than from the date of sample collection?

Response: Time frames are limited by the requirements of Part 257.

62. Section 845.610(e)(4) uses the phrase "statistically significant increase." Since the proposed rule requires immediate corrective action if an exceedance occurs, why is the Agency requiring an evaluation of the statistically significant increase?

Response: The corrective action process is required to begin within 90 days if there is not an alternative source demonstration. Owners and operators have up to a year to submit a corrective action plan after completing a corrective measures assessment. Section 845.610(e)(4) is in the context of a discussion in an annual report. Therefore, discussion of statistically significant increases that may have occurred during that time frame are reasonable.

Section 845.620 Hydrogeologic Site Characterization

63. Subsections (b)(3) and (4) of this Section the states "nearby" water bodies, drinking water intakes, and pumping wells. Please specify the search radius for this assessment work.

Response: When drafting Section 845.620(b)(3) and (4) the Agency did not specify a search radius as it believes this information will be site-specific. Large water bodies, intakes and well pumpage would have a larger impact further away than would smaller water bodies and groundwater or surface water usage. It is expected that groundwater professionals use their professional knowledge and judgment.

64. To fulfill requirements under subsection (b)(13), will available local stratigraphic information be sufficient to fulfill this requirement without necessarily drilling to 100 feet as part of the site-specific study?

Response: That will depend on how much site-specific stratigraphic data is already available.

65. Why does subsection (b)(17) require a groundwater classification pursuant to 35 Ill. Adm. Code 620 when the proposed rule is based on assuming a Class I drinking water aquifer and establishing the operative numerical standards that need to be met based on a Class I aquifer?

Response: Determination of the groundwater class is necessary because the Part 620 standards that don't have a corresponding GWPS in Section 845.600 still apply during the active life of a CCR surface impoundment. After the active life of a CCR surface impoundment, Part 620 applies just as it does now.

Section 845.630 Groundwater Monitoring Systems

66. Section 845.630(a)(1) states that the background water must represent the quality that "has not been affected by leakage from landfill containing CCR or CCR surface impoundment." What is the Agency's definition of a "landfill containing CCR"?

Response: The Agency does not define "Landfill Containing CCR", but believes it has the same meaning as a CCR landfill as defined in Part 257.

67. Why is certification of the groundwater monitoring system limited to a qualified professional engineer and does not include a qualified professional geologist/hydrogeologist?

Response: Part 257 only recognizes certifications by professional engineers, therefore, Part 845 was drafted to be consistent.

Section 845.640 Groundwater Sampling and Analysis Requirements

68. The proposed rule states that the monitoring program must include all parameters listed in Section 845.600 through post-closure care of the CCR surface impoundment.

a) Has the Agency considered allowing for a more focused and site-specific analyte list to be developed based on characterization of the ash within the regulate impoundment, as also suggested in the comment above? If not, what is the Agency's basis for not allowing a site-specific analyte list?

Response: The Agency considered a site-specific analyte list based on detected constituents, since it is allowed under Part 257, but opted for a simpler set of monitored constituents, which doesn't vary site to site. The Agency also notes that Calcium monitoring is required in Section 845.650(a).

b) Would the Agency agree to allow an owner/operator drop a monitoring parameter from the analytical list if it is documented after three or five years of quarterly sampling that the parameter has not been detected and it can be shown that it is not expected to be present within the CCR placed into the regulated unit?

Response: Not based on Part 845 as proposed.

Section 845.650 Groundwater Monitoring Program

69. This section specifies that background water quality is to be developed based on a minimum of eight sampling events which are to occur within 180 days (6 months). On pages 10 and 11 of your written testimony you correctly state that quality of groundwater is known to have natural variation both spatially and temporally and that is why appropriate statistics need to be applied to assist in providing an understanding of the data being generated and its variability and distribution.

a) Knowing that seasonality in data distribution, such as chloride, is common in Illinois due to changing of seasons, what is the basis to limit the timeframe for background data development to 180 days?

Response: The 180-day requirement was established by USEPA in Part 257.

b) Collecting eight rounds of sampling in 180 days also requires a sampling event to occur every 22.5 days. Have you considered that if the CCR surface impoundment is located within an area of low permeability aquifer matrix materials (e.g., silty or clayey matrix) sampling every 22.5 days will likely not provide independent sampling results and may result in highly autocorrelated, non-independent data?

Response: The existence of high autocorrelation does not necessarily mean a sample is not independent. Regardless, the 180-day requirement was established by USEPA in Part 257.

(1) If you did consider that a CCR surface impoundment may be within an area of low permeability, how does the Agency propose to avoid the non- independent data?

Response: As stated in Response 69(b), independent samples can be collected even if they are highly autocorrelated. Regardless, the 180-day requirement was established by USEPA in Part 257.

(2) If you did not take into consideration the permeability of the area a CCR surface impoundment is in, please explain why you did not consider that.

Response: The 180-day requirement was established by USEPA in Part 257.

70. What is the Agency's basis to require groundwater elevation monitoring on a monthly basis?

Response: Public comments received by the Agency suggested daily groundwater elevation monitoring. The Agency believes that frequency would result in unmanageably large data sets for reporting, while monthly monitoring significantly reduces the data burden, but provides additional groundwater flow direction data points between the quarterly analytical chemistry monitoring events.

71. The proposed rule states that the owner/operator must take certain actions if there is an exceedance of a ground water protection standard confirmed by an immediate resample.

a) What is the Agency's basis to require corrective action following the exceedance of one data point with an immediate resample?

Response: One data point with a confirmatory sample is two data points. Part 620 does not require a resample, nor does Part 257 require a resample prior to the initiation of corrective action. Therefore, Part 845 is consistent with both of those rules.

b) Please identify other monitoring and corrective action programs in Illinois or otherwise that trigger corrective action based on one data point with one confirmation sample.

Response: Please see the answer to Question #71(a).

c) Please identify any scientific studies the Agency is relying upon to support the requirement to conduct corrective action following detection of one constituent above a standard and a confirmation sample.

Response: Initiation of corrective action upon an exceedence of a GWPS is a requirement of Part 257. As an alternative to corrective action, the owner or operator has the option of providing an alternative source demonstration pursuant to Section 845.650(d)(4).

d) What is the Agency's definition of "immediate resample?"

Response: The Agency did not define "immediate resample" but recognizes that the need for a resample wouldn't be known until the initial sample results are available to the owner or operator.

e) Is the formal confirmation of exceedance considered from the date of sample collection or the date of receipt of all analytical data?

Response: Section 845.600(a)(1) requires the initiation of corrective action within 90 days of a detected exceedence of a GWPS, not the confirmation of that detection. Since an exceedence can't be known until sample results are available, the receipt date of analytical data for the initial detection of an exceedence begins the 90-day period.

f) Why must an owner/operator notify the Agency and place notification in the operating record before an Alternative Source Demonstration is conducted?

Response: The notification to the Agency and the operating record occurs after the initial detection and the confirmation sample. If the detection is confirmed by a resample, the Agency considered the likelihood high enough, that the detection is not an error and the notification should occur.

72. Section 845.650(d)(4) allows for completing an Alternate Source Demonstration (ASD) and allows 60 days from the detected exceedance to complete the ASD. As currently written, it appears that the characterization of the nature and extent of the release, which is described under Section 845.650(d)(1), would need to be initiated immediately upon the detection of a potential groundwater protection standard exceedance. If an ASD is completed that successfully demonstrates another source, then there is no release from the regulated unit and there is no need for initiating a nature and extent characterization under this rule.

a) Please confirm that if an owner/operator decides to conduct an ASD under Section 845.650(d)(4), they do not need to begin any additional characterization or corrective action work until the ASD and review of the ASD by Illinois EPA is complete?

Response: Section 845.650(d)(1) does not specify if the owner or operator must conduct the required characterization while completing the ASD and the ASD is under Agency review. That is a business decision each owner or operator will have to make. However, the owner

or operator is not relieved of the requirements of 845.650(d) if they choose to wait. If the Agency does not concur with the ASD, initiation of corrective action must begin 90 days after the initial exceedance of a GWPS is detected.

b) May an owner/operator rely upon the Alternative Source Demonstration prepared pursuant to the Federal CCR Rules?

Response: The owner or operator could submit an ASD prepared for the Federal CCR Rule for Agency review. The Agency would not be obligated to concur with such an ASD.

c) Is the 60 days from the date of the initial sampling or from the date of the resampling?

Response: The 60-day period starts with the receipt of monitoring results, by the owner or operator, of the initial detection of a GWPS exceedence.

d) Is the formal confirmation of exceedance considered from the date of sample collection or the date of receipt of all analytical data?

Response: Please see the answer to Question #71(e).

e) The Federal Rule allows for 90 days to conduct an ASD. The 90 days allows enough time to conduct a Leaching Environmental Assessment Framework (LEAF) method or a combination of LEAF methods. The analytical turnarounds alone for these tests can range anywhere from 28 days to 84 days, depending on objective of the study and the appropriate LEAF method to meet that objective. What is the Illinois EPA's basis to establish the 60-day timeframe for completing an ASD?

Response: The federal Rule also requires the initiation of corrective action within 90 days of an exceedence of a GWPS. Because the Federal Rule does not require review with concurrence or non-concurrence as does Part 845, the Agency reduced the time allowed for an ASD to 60 days, to allow 30 days for review and response to the ASD by the Agency within the overall 90-day time frame.

f) Once the ASD is submitted to Illinois EPA for review, will Illinois EPA provide review comments and provide the owner/operator an opportunity to respond to those comments?

Response: Given the required short time frames, Part 845 does not incorporate such an exchange of information.

g) What, if any, criteria apply to the review process by which the Agency will make a determination whether the exceedance is not the result of the operation of the unit?

Response: Section 845.650(d)(4) requires the owner or operator to provide factual or evidentiary information supporting the conclusion that the exceedence of the GWPS was due to a source other than the CCR surface impoundment caused the contamination, an error in

sampling, analysis or statistical evaluation, or due to natural variation in groundwater quality or groundwater flow direction or elevation. No other criteria for review are provided.

h) If the Agency concurs with the owner or operator's ASD that the release is not attributable to a unit but is either due to natural causes or another source, does the owner or operator have to continue thereafter to notify the Agency of confirmed detections of concentrations above any groundwater quality standard for these constituents?

Response: Part 845 does not include a limitation on the number of times an alternative source demonstration may be required. Whether additional ASDs would be required may vary depending on the cause of the initial ASD.

i) If the Agency disagrees with a company's ASD, will the Agency give the company an opportunity to develop more data to respond to the Agency's concern?

Response: Part 845 does not prohibit the owner or operator from submitting additional data within the time frames allotted.

j) If the Illinois EPA disagrees with the conclusions of the ASD and the owner/operator believes that its CCR surface impoundment is not the source of the exceedance, what is the process to appeal the Agency's decision?

Response: The Agency's position is that non-concurrence with an ASD is a final decision which can be appealed pursuant to Part 105 of the Board's rules.

Section 845.660 Assessment of Corrective Measures

73. On page 13 of your testimony, you state that this subsection is intended to "distinguish between a long-term release to groundwater and a sudden catastrophic release to the surface." Please confirm that "detection of a release" in Section 845.660(a)(1) means a sudden catastrophic release. If not, please provide the Agency's definition of "detection of a release."

Response: Please see Response to Board Question 49(b).

74. The Draft Rule states that the owner/operator must discuss the results of the assessment of corrective measures at a public meeting at least 30-days prior to the selection of a remedy as required under Section 845.240. Section 845.240 specifies that two public meetings are to be held at least 30-days before the submission of a construction permit application.

a) Is this intended to also mean that the public meeting must be held before selecting a remedy based on the assessment of corrective measures?

Response: No, the public meetings required in Section 845.240(a) are to be held after the assessment of corrective measures. Selection of a remedy occurs upon submission of a permit application.

b) If so, does the 30-day time period start from the date of the first or second of the required public meetings?

Response: Please see the answer to Question #74(a).

Section 845.670 Corrective Action Plan

75. Section 845.670(b) requires that an owner/operator submit a corrective action plan within one year of completing the assessment of corrective measures. What is the Agency's basis to require a plan within one year?

Response: Part 257 doesn't provide any time frame within which a corrective action plan must be developed, as long as semi-annual reports on the evaluation process are made. The Agency believes one year after the assessment of corrective measures is completed is a reasonable amount of time to fully develop a corrective action plan and submit it as part of a permit application.

76. Will the Agency allow for an extension to collect additional data or conduct additional modeling?

Response: Such a time extension is not included in Part 845. Given the thorough nature of the required hydrogeologic site characterization, the additional characterization required in Section 845.650(d) and the assessment of corrective measures, the Agency believes one year after the assessment of corrective measures is completed is a reasonable amount of time to fully develop a corrective action plan and submit it as part of a permit application.

77. What is the Agency's definition of "subsurface ecosystems" in Section 845.670(f)(5)(D)?

Response: The Agency does not have a definition of subsurface ecosystems, however, taken in the context of the rest of Section 845.670(f)(5)(D), an owner or operator would need to consider whether any conditions exist below the CCR surface impoundment, for example caves, which may support unique flora or fauna.

VI. QUESTIONS FOR AMY ZIMMER

Section 845.700 Required Closure or Retrofit of CCR Surface Impoundments

78. Unlike the Federal CCR Rule, the Proposed Rule does not allow for an extension of the October 15, 2023 date to cease placement of CCR after a company has demonstrated that there were no alternative closure options available. Why did Agency decide not to follow the Federal CCR Rule's allowance for an extension?

Response: The Agency believes it would be extremely challenging for owner or operator to meet the burden of proof required to meet the alternate capacity demonstration. (257.103 (a)(1)(I)) Additionally, the Agency believes allowing such extensions could potentially present additional difficulties meeting final closure in a timely manner.

79. Section 845.700 requires that construction permit applications for Category 1-5 CCR surface impoundments be submitted by January 1, 2022. Section 845.240 requires at least two public meetings 30 days in advance, effectively shortening the time to prepare an application by at least five weeks. The construction permit application must include the engineered design of a closure or retrofit project, final closure and post-closure plans, and groundwater modeling. [2]

a) Can you detail the Agency's thought process on how a permittee would be able to complete the tasks that are required to be submitted with the first construction permit applications due January 1, 2022?

Response: The Agency acknowledges that some of the timeframes are tight within the rule. The timeframes placed upon the Agency in parts of the rule are also tight. However, the Agency believes the timeframes laid out in the rule can be managed. Section 22.59 of the Act requires meaningful public involvement. The Agency believes public meetings are needed here for meaningful public involvement. Additionally, Part 257 already requires the closure of CCR surface impoundments that don't meet location restrictions or do not have a Part 257 compliant composite liner, and it already requires corrective action for exceedences of GWPS. Owners and operators should be aware of these requirements and should already be collecting and organizing site specific data for required closure and corrective action.

b) Would the Agency consider allowing an extension if good cause were given?

Response: Allowable extensions are listed in Section 845.760(c).

The Agency does not support an extension of the due date for applications filed pursuant to the schedule in Section 845.700(h). These due dates allow 9 months for Category 1-4 impoundments, 15 months for Category 5 impoundments, and 27 months for Category 6 and 7 impoundments. Category's 1 through 4 represent those with the highest likelihood of impacts to public health or the environment.

80. Section 845.700(h)(5) states that if the Agency's denial is appealed, an owner/operator must submit a revised construction permit application within 90 days after a final decision by the Illinois Pollution Control Board ("Board").

a) If the Board overturns the Agency's denial of a construction permit application, why would an owner/operator be required to submit a new construction permit application?

Response: In light of the questioning, the Agency suggests the following revision to Section 845.700(h)(5):

"If the Agency's denial is appealed and upheld, the owner or operator must submit a revised construction permit application for closure within 90 days after a final decision by the Illinois Pollution Control Board is rendered."

[2] **See FN 1.**

b) What is the Agency's basis to require another public meeting following the Agency's denial of a construction permit? What is the purpose of this public meeting?

Response: The owner or operator must hold a public meeting to discuss their proposed response to all deficiencies identified by the Agency in the denied permit.

c) If an owner/operator appeals the Agency's denial, is it the Agency's position that a public meeting must occur before the Board has rendered a decision on the Agency's denial?

Response: No.

d) If the Board overturns the Agency's denial of a construction permit application, is it the Agency's position that an owner/operator must still have a public meeting?

Response: No

e) What is the Agency's basis to require a revised construction permit application within 90 days after a final decision by the Board? Did the Agency consider that because this section requires a public meeting at least 30 days prior to submission of the application and all information must be made available to the public 14 days before the meeting, an owner/operator is only afforded 44 days to redesign closure or retrofit? How long does the Agency think it takes to redesign a closure or retrofit of a CCR surface impoundment?

Response: The Agency acknowledges this is a tight timeline if a complete redesign from scratch is needed. However, a complete redesign is unlikely to be needed. The Agency expects it is more likely changes will be needed to be made to part of the plan rather than a complete redesign, and this timeframe will allow that to be accomplished.

Section 845.740 Closure by Removal

81. What is the Agency's basis for requiring written notice to local governments the CCR material will be transported through explaining the hazards of CCR dust inhalation, transportation plan, and transportation schedule?

Response: The public has expressed concern about large amounts of CCR being transported through their communities and about the dangers associated with inhalation and contact with CCR during transport. The Agency believes it is not unreasonable to provide information to communities through which the CCR will be transported.

a) Does the Agency require this for other nonhazardous or special waste materials?

Response: No. (Agency Response)

b) Does this apply when the CCR material is being used for beneficial use?

Response: Yes. (Agency Response)

82. If an owner/operator removes all of the CCR from a CCR surface impoundments and desires to reuse the impoundment for another purpose wholly unrelated to CCR, would the Agency consider the removal a "closure" subject to Section 845.740 or "retrofitting" subject to Section 845.770?

Response: The Agency would consider this a closure by removal, subject to Section 845.740, which would also require removal of the contaminated liner and any CCR that was released from the CCR surface impoundment. The CCR surface impoundment would also be subject to corrective action pursuant to Sections 845.660, 845.670 and 845.680, if there are exceedences of the GWPS at the time of removal.

Section 845.770 Retrofitting

83. In your answer to Question 82 above, if you consider the removal of all of the CCR with the intention of using the impoundment for another purpose a "retrofit" subject to Section 845.770, what is your basis?

Response: Please see Response 82.

84. If the future use of an impoundment will not include accumulation of CCR, what is the Agency's basis to require removal of the liner system?

Response: The Agency would consider the liner system to be contaminated with CCR.

Section 845.790 Post-Closure Care Requirements

85. If the post-closure sampling analysis shows that certain constituents are below the groundwater protection standards in 845.600, would the Agency allow an owner/operator to petition the Agency to reduce the post-closure care analysis? If not, why not?

Response: Please see Responses 68(a) and (b).

*The Agency notes that Questions 86-90 were not submitted.

VII. QUESTIONS FOR MELINDA SHAW Section

845.740(c)(1)(A)

91. Under Federal law, hazardous wastes that are beneficially used materials are not subject to federal hazardous waste regulations, including the manifest requirements. Under this section, do manifesting requirements also apply to CCR materials that are hauled offsite for beneficial use purposes? If so, would the Agency consider a modification to allow for an exception for CCR materials that are removed for beneficial reuse?

Response: Yes, the manifesting requirements in 845.740(c)(1)(A) apply regardless of the subsequent purpose intended for the CCR. No, the Agency would not recommend such an exception.

(Agency Response)

Section 845.810 Publicly Accessible Internet Site Requirements

92. What is the Agency's basis to require every document in the operating record be placed on a public website? What considerations did the Agency make on the burden to the regulated entities to maintain all of the documents on a website?

Response: The IEPA's basis for requiring documents to be placed on a publicly accessible website is to satisfy the requirement in Section 22.59 of the Act to facilitate "meaningful public participation". The 40 CFR 257 regulations require that the information included in the operating record be placed on a publicly accessible website. (Agency Response)

93. What is the Agency's basis to require that the entire operating record be maintained on the website until 3 years after post-closure care?

Response: The IEPA's basis for requiring documents to be placed on a publicly accessible website is to satisfy the requirement in Section 22.59 of the Act to facilitate "meaningful public participation". The 40 CFR 257 regulations require that the information included in the operating record be placed on a publicly accessible website. (Agency Response)

VIII. QUESTIONS FOR ROBERT L. MATHIS

Section 845.930 Cost Estimates

94. Mr. Dunaway testified that the "proposed Part 845 are intended to be standalone standards, unrelated to Part 620." *See Pre-filed Testimony of Lynn E. Dunaway*, June 3, 2020, at p. 6. Because proposed Part 845 is intended to be unrelated to Part 620, what is the basis to include it in Section 845.930(c)(1)?

Response: Section 845.930(c)(1) includes 35 Ill. Adm Code 620 because inactive closed CCR surface impoundments, as defined in Part 845, are not subject to the GWPS of Section 845.600. Inactive closed CCR surface impoundments are however subject to the financial assurance requirements of Part 845, as they may become subject to additional corrective actions under Part 845.170(c).

95. What is the Agency's basis to require a preliminary corrective action cost estimate that is equal to 25% of the costs calculated in subjection (b)? Why did the Agency choose 25%?

Response: Financial assurance is required for closure, post-closure care and corrective action, however the potential costs of each are not equal. The most expensive activities by far are closure

and potentially corrective action. Because the owners and operators subject to Section 845.930(c)(1) are known to have exceedances of GWPS, some type of corrective action will be necessary. Therefore, the Agency believes 25% of the total cost is not unreasonable. (Agency Response)

96. Section 845.930(c)(4) requires an owner/operator to increase the corrective action cost estimates and the amount of financial assurance if changes in the corrective action plan increase the maximum costs of the corrective action. If changes in the corrective action plan *decrease* the maximum costs of the corrective action, will the Agency allow an owner/operator to decrease the corrective action cost estimates and the amount of financial assurance?

Response: If the cost estimate in the latest approved permit is less than the financial assurance, then the financial assurance may be reduced to equal the cost estimate in accordance with Section 845.930(c)(5).

Section 845.940 Revision of Cost Estimates

97. Would the Agency consider amended mechanisms in addition to annual? For example, as major construction activities are completed, would the Agency allow a reopening to amend cost estimates at any time.

Response: The Agency would allow amendments to the letter of credit and riders to the bond (performance and payment) to increase the mechanism or decrease (with Agency written approval) the mechanism. Only if all the other terms and conditions of these mechanisms are compliant with the Regulations.

The Agency would allow the adjustment of the cost estimate utilizing the permit modification process.

98. Similar to Question 96 above, Section 945.940(b) requires an owner/operator to modify the cost estimate after the Agency has approved a request to modify the corrective action plan, closure plan or post-closure plan if the change in the modified plan increases the cost. If changes in the plans *decrease* the costs, will the Agency allow an owner/operator to decrease cost estimate?

Response: If the changes in the modified plan result in actual decreased costs, then the Agency would allow a revised cost estimate reflecting that decrease.

Section 845.970 Surety Bond Guaranteeing Payment

99. In Section 845.970(e)(2)(B), what is the Agency's basis to include an adjudicated bankruptcy as one of the surety's liabilities if the surety and principal liability are tied to "non- action" as described in Sections (e)(2)(A) and (C) through (F) address?

Response: This is to be consistent with the surety bond guaranteeing payment in other programs: Sections 807.662(e)(2); 811.711(e)(2) and 848.411(e)(2).

Section 845.990 Letter of Credit

100. In Section 845.990(f)(2), the Agency approval reduction in the amount of credit if the cost estimate decreases. How long does the Agency take to review and approve a request to reduce the amount of credit?

Response: The Agency does not currently address cost estimates for CCR surface impoundments and is therefore unable to answer this question. (Agency Response).

101. What is the basis to require the issuing institution to notify at least 120 days before the expiration date the Agency and the owner/operator that the letter of credit will not be renewed?

Response: This is to be consistent with the letter of credit mechanisms in other programs: Sections 724.243(c)(5) and 724.245(c)(5); 725.243(d)(5) and 725.245(d)(5); 807.664(g)(2); 811.713(g)(2) and 848.413(g)(2).

Would the Agency consider a shorter time for the issuing institution?

Response: No, the Agency would not consider a shorter time. A shorter time would make this Rule inconsistent with the other programs.

102. In Section 845.990(g)(3), the Agency must return the letter of credit to the issuing institution for termination. How long does the Agency take to review and approve an alternative financial assurance or a release from the requirements?

Response: Typically, the Agency's FAP will receive a request to terminate the letter of credit, either because the owner/operator is submitting alternative financial assurance or is released from the requirements of Part 845. Once this occurs, the Agency's FAP can usually process this within a month. Obviously, it should be noted that this is dependent upon workload and staffing levels.

This also would be the same process with the other financial assurance mechanisms listed in Part 845.

DYNEGY

1. **In the Agency's Statement of Reasons, it states that the "third purpose and effect" of its proposed regulations to be codified at 35 Ill. Adm. Code 845 ("Part 845") is "to adopt the federal CCR rules in Illinois and obtain federal approval of Illinois' CCR surface impoundment program." (Statement of Reasons at 10). The phrase "federal CCR rules" refers to the U.S. Environmental Protection Agency's 2015 rule, as amended, and codified at 40 C.F.R. Part 257 (the "CCR Rule"), correct?[1]**

   Response: Yes.

   a. **To "obtain federal approval," under the Water Infrastructure Improvements for the Nation Act (P.L. 114-322) ("WIIN Act"), Part 845 must be "at least as protective as" the federal rule, correct? (42 U.S.C. § 6945(d)).**

   Response: Yes. Part 845 must be at least as protective and comprehensive as Part 257.

   b. **What does IEPA believe is required for Part 845 to be "at least as protective as" the CCR Rule?**

   Response: Any requirement in Part 845 must be at least as protective of human health and the environment as the requirements of Part 257.

   c. **Does IEPA interpret the phrase "as protective as" in the WIIN Act, to create the same standard as the phrase "at least as protective and comprehensive," as used in 415 ILCS 5/22.59(g)(1)?**

   Response: The phrase "as protective as" relates only to the phrase "at least as protective" and does not include "and comprehensive".

   d. **Does IEPA believe its Part 845 proposal is "as protective" as the federal CCR Rule?**

   Response: The Agency believes Part 845 proposal is more protective than the federal CCR Rule.

2. **The Agency cites the CCR Rule's 2015 preamble (80 Fed. Reg. 21,301 (Apr. 17, 2015)), as one of the "List of Documents Relied Upon" in developing Part 845. (Statement of Reasons at 43). The CCR Rule was promulgated by U.S. EPA pursuant to its authority under the Resource Conservation and Recovery Act ("RCRA"), correct?**

   Response: Yes.

a. The preamble to the 2015 CCR Rule states that the CCR Rule must meet RCRA's requirement that there be "'no reasonable probability of adverse effects on health or the environment" from the disposal of CCR in CCR surface impoundments, correct? (81 Fed. Reg. at 21,311).

Response: Yes.

b. To be "at least as protective" as the CCR Rule, does Part 845 also need to ensure that CCR surface impoundments subject to Part 845 will not present a "reasonable probability of adverse effects on health or the environment"?

Response: Part 845 must be at least as protective and comprehensive as Part 257.

3. Is IEPA aware that U.S. EPA used a 2014 risk assessment (*Human and Ecological Risk Assessment of Coal Combustion Residuals*, Reg. ID No. 2050-AE81 (Dec. 2014)) to "estimate the resulting risks to human and ecological receptors" from CCR units? (*See* 80 Fed. Reg. at 21,433).

Response: Yes.

a. Has IEPA reviewed that risk assessment?

Response: No. The Agency is aware this document exists.

b. Did IEPA rely upon U.S. EPA's risk assessment to support its Part 845 proposal?

Response: Only to the extent that USEPA's risk assessment was used by USEPA to develop the requirements of Part 257.

c. Does IEPA view U.S. EPA's risk assessment as sufficiently conservative? In other words, does the Agency believe that U.S. EPA adequately assessed and quantified the potential risks associated with CCR surface impoundments?

Response: The Agency did not review the U.S. EPA's risk assessment.

d. If so, are there any risks that IEPA does not believe were adequately assessed in U.S. EPA's risk assessment?

Response: See Response 3(c).

e. Has IEPA performed its own risk assessment to identify risks associated

with surface impoundments warranting regulation?

Response: No.

f. Are there any other risk assessments that IEPA relied on in developing its Part 845 proposal?

Response: No.

4. In its 2015 preamble for the CCR Rule, U.S. EPA stated that it "reviewed the risk assessment and the damage cases to determine the characteristics of the surface impoundments that are the source of the risks the rule seeks to address. Specifically, these are units that contain a large amount of CCR managed with water, under a hydraulic head that promotes the rapid leaching of contaminants." (80 Fed. Reg. at 21,357.) Does IEPA agree that "units that contain a large amount of CCR managed with water, under a hydraulic head" are the "source of the risks" that Part 845 seeks to address? If not, why not?

Response: Part 845 addresses CCR surface impoundments.

5. How did IEPA identify the 73 surface impoundments listed in the Statement of Reasons? (Statement of Reasons at 37-38).

Response: The Agency utilized Agency and publicly available records.

6. Are Illinois landfills containing CCR subject to the Board's rules governing landfills (e.g., 35 Ill. Adm. Code 810 – 815)?

Response: They are; however, landfills are not proposed for regulation by Part 845.

a. Do those rules include provisions to prevent and correct groundwater contamination?

Response: Yes, but landfills are not proposed for regulation by Part 845.

7. Are Illinois landfills containing CCR also subject to the requirements of the CCR Rule?

Response: CCR landfills owned or operated by utilities and independent power producers are regulated by Part 257.

a. Do those rules include provisions to prevent and correct groundwater contamination?

Response: While the Agency is aware that certain provisions of Part

257 apply exclusively to CCR landfills, the Agency has not assessed those requirements in depth, unless the Part 257 requirement also relates to CCR surface impoundments.

8. **Does IEPA have any information suggesting that the Board's rules governing landfills, as applied to the units subject to those rules, are insufficient to ensure protection of human health and the environment in Illinois?**

   Response: The Agency has not sought such information.

9. **On page 8 of their June 15, 2020 public comments, the Environmental Law & Policy Center, Prairie Rivers Network, and Sierra Club (collectively, the "ENGOs") state that "CCR landfills and fill in Illinois are leaching pollutants into our waters and can be expected to continue to do so." Assuming that fact pattern, could such groundwater contamination be subject to Section 12 of the Environmental Protection Act and Part 620 of the Board's rules?**

   Response: Yes.

10. **Units that "closed" (units that were capped or otherwise maintained to no longer contain water) prior to the effective date of the CCR Rule are not subject to the CCR Rule, correct? (80 Fed. Reg. at 21,343).**

    Response: CCR surface impoundments must meet all of the requirements of Part 257 to ensure that they pose no reasonable probability of adverse effects on health or the environment, and are then not considered open dumps.

11. **Does IEPA agree with U.S. EPA that units should be considered "closed" if they are "capped or otherwise maintained" such that they "no longer contain water and can no longer impound liquid?"**

    Response: Please see Response 10 and Section 845.100(a) and definitions contained in Section 845.120.

12. **Does IEPA agree with U.S. EPA that units that are "closed" are not "CCR surface impoundments"? If not, why not?**

    Response: "Closed" for purposes of Part 845 means placement of CCR in a surface impoundment has ceased, closure has been completed and post-closure has been initiated in accordance with Subpart G. "Inactive Closed CCR surface impoundment" refers to those inactive surface impoundments that completed closure before October 19, 2015 with an Agency-approved closure plan.

13. **Has IEPA performed any assessment to understand any risks to human health or the environment associated with surface impoundments in Illinois that contain CCR but no longer contain water?**

Response: No.

14. U.S. EPA chose not to regulate units that contain "de minimis" amounts of CCR, correct? (80 Fed. Reg. at 21,357).

Response: U.S. EPA left this concept vague in part 257 by not defining "de minimis" amounts of CCR.

15. Does the Agency agree that Part 845 does not regulate surface impoundments that contain "de minimis" amounts of CCR?

Response: No.

16. Has IEPA performed any assessment to understand any risks to human health or the environment associated with surface impoundments in Illinois that contain "de minimis" amounts of CCR?

Response: No.

17. Once Part 845 becomes effective, will existing CCR surface impoundments be required to obtain operating or construction permits under 35 Ill. Adm. Code 309 ("Part 309") for corrective action, closure, post-closure care, or retrofit activities conducted under Part 845?

Response: No. Part 845 will govern operating and construction permits for corrective action, closure, post-closure care, or retrofit activities following the adoption and effective date of this Section.

18. Does the Agency believe any modifications to Part 309 are necessary to harmonize it with proposed Part 845?

Response: No. Part 845 is being adopted after Part 309, and is specifically applicable to CCR surface impoundments as directed by an act of the legislature.

19. In the event that the Agency approves of an existing groundwater monitoring well or system under Part 845.210(d)(1), will it also approve the use of the existing sampling data collected by that well or system?

Response: The Agency intends to make that determination on a case by case basis after review of the available data.

20. Does Part 845.220 require the closure application to include a Part 845.660 assessment of corrective measures when closure is part of the selected groundwater corrective action?

Response: An owner or operator may submit a single construction permit pursuant to Section 845.220(e), when closure and corrective action will be completed simultaneously pursuant to Section 845.660(e), provided all the requirements of

Section 845.660 and 845.710 are included in the permit application.

a. If so, do each of the elements of the corrective measures assessment outlined in 845.660 need to be completed at the time the closure application is submitted?

Response: Please see Response 20.

21. Does Part 845.220 require the closure application to include a Part 845.670(e) corrective action alternatives analysis when closure is part of the selected groundwater corrective action?

Response: Please see Response 20.

a. If so, do each of the requirements in Part 845.670 need to be completed and included with the closure application?

Response: Please see Response 20.

22. Part 845.220(c)(2)(E) & (d)(3)(E) require owners/operators to provide licenses/software to the Agency to review groundwater modeling. Is the Agency aware of any Illinois or federal regulatory programs that require owners/operators to provide the Agency with either software or licenses to software?

Response: Yes, the Bureau of Land Permit Section requires an applicant to submit a fully licensed copy of any groundwater computer model(s) used for any permit application that addresses or revises a groundwater impact assessment.

23. Has the Agency approved closure of CCR surface impoundments in the past without requiring owners/operators to provide software for the review of groundwater modeling?

Response: Yes. It has at times made it more difficult. Being able to open and access the model files can help in understanding the development of the model where documentation may be lacking.

24. Has the Agency attempted to purchase or otherwise gain access to the software it now requires?

Response: No. There is no required standard groundwater modeling software interface required. There are multiple different programs available to use to conduct the modeling and no way to predict which one(s) will be used.

25. In proposed 845.230(d)(2)(H)(iv) & (d)(3)(E)(iv); 845.610(b)(1)(D); and 845.650(b)(1)(A), can the eight independent samples required be satisfied using existing sampling data from an approved groundwater monitoring well or system?

Response: The Agency intends to make that determination on a case by case basis after review of the available data.

26. Will the Agency accept a single permit application for closure, corrective action, or post-closure care when multiple units making up the same waste water treatment system are being closed as a single unit?

Response: Multiple CCR surface impoundments may be included in a single permit application.

27. The Agency has issued invoices seeking initial fees and annual fees for each of the 73 CCR surface impoundments identified in the Statement of Reasons, correct?

Response: Yes.

a. Where multiple units are part of the same wastewater treatment system, will the Agency's decision to invoice units as separate CCR surface impoundments preclude closing those units under a single permit application?

Response: Multiple CCR surface impoundments may be included in a single permit application.

b. Where multiple units are part of the same wastewater treatment system, will the Agency's decision to invoice units as separate CCR surface impoundments preclude those units from using a single multi-unit groundwater monitoring network in accordance with Part 845.630(d)?

Response: Whether or not a multi-unit groundwater monitoring system is appropriate must be determined on a case by case basis.

c. Where multiple units are part of the same wastewater treatment system, will the Agency's decision to invoice units as separate CCR surface impoundments preclude the use of combined groundwater modeling to assess impacts from and closure/groundwater corrective measures for multiple units making up the same waste water treatment system?

Response: The Agency anticipates that modeling that includes all of the CCR

surface impoundments at a facility will provide a more realistic model.

28. Please identify all permit programs administered by IEPA that require a permittee to hold a public meeting before submitting a permit application to the Agency.

Response: After a non-exhaustive survey, the Bureau of Water is not aware of any other programs administered by IEPA that require a public meeting prior to submitting a permit application.

a. Please identify any such permit programs that require two public meetings prior to submitting a permit application.

Response:. See above.

b. Please identify all permit programs administered by IEPA that require an applicant to provide the public with preliminary decisions regarding a permitted activity and/or draft submittals before a permit application is submitted to the Agency.

Response: After a non-exhaustive survey, the Bureau of Water is not aware of any such permit program.

29. Will the Agency identify the facilities for which it expects non-English language notification, pursuant to proposed Part 845.240(c)?

Response: No.

30. Does the Agency view the public notice procedures under Part 845.260(b)(3) as adequate to ensure public awareness and opportunity to participate in the public comment period under Part 845.260(c)? Please explain.

Response: Yes. These requirements are similar to the process used by the Agency's NPDES permit process.

a. If so, why are the notification requirements imposed on owners/operators under Part 845.240 substantially more expansive?

Response: These requirements are based on the requirement of Section 22.59 of the Act to provide meaningful public participation and are responsive to comments received from the public during outreach.

31. When does IEPA expect Part 845 to become effective?

Response: Section 22.59 requires that the Board adopt regulations within one year of the

Agency's proposal of Part 845, which would make adoption required by March 31, 2021.

a. Has IEPA done any analysis to determine how much time is required for owners/operators to perform a closure alternatives analysis with groundwater modeling, facilitate two public meetings, and complete the rest of the application materials required by Part 845?

Response: No.

32. What is the basis for the construction quality assurance requirements proposed in Part 845.290?

Response: The requirement for weekly CQA is patterned after Part 840.

a. What is the basis for requiring weekly construction quality assurance reports to be prepared and placed in the operating record under Part 845.290(b)(2)?

Response: Placing CQA reports in the operating record weekly allows the public to track closure progress.

33. What regulatory program(s) governs worker safety in Illinois?

Response: OSHA primarily governs worker safety in Illinois, and as written, some aspects of worker safety will be enforceable under Part 845. Additionally, under the CERCLA program, a health and safety plan is required to be submitted in conjunction with remediation projects. The Agency cannot speak to all the state or federal programs that may also include aspects of worker safety.

a. Does IEPA have any reason to believe those regulatory programs are insufficient?

Response: The Agency objects to the scope of the question. Further, the Agency would be forced to speculate what is meant by or considered to be sufficient, whether 845 will meet that burden since it hasn't been adopted, and whether that burden has been met by other federal or state programs.

b. Are any of these programs administered by IEPA?

Response: Part 845 will be upon adoption.

34. Does the federal hazardous waste program set forth requirements for a safety and health plan to protect workers during the remediation or closure of hazardous waste sites?

Response: Worker safety requirements are covered in 29 CFR 1910 for general industry and 29 CFR 1926 for construction. Remediation and closure are parts of the

RCRA corrective action that is taking place at each of these sites and may include closure and/or remediation.

35. Has the Agency determined the costs for owners/operators to perform annual updates to their safety and health plans, as required by proposed Part 845.530(a)?

Response: No.

36. Has the Agency determined the costs for owners/operators to perform a structural stability assessment, safety factor assessment, and inflow design flood control system plan on an annual basis, as required by proposed Part 845.540(b)?

Response: No.

37. Most of the constituents listed in Part 845.600 are naturally occurring in soils in Illinois, correct?

Response: Yes.

38. Isn't it true that the sampled concentration of these inorganic chemicals often increase as the turbidity increases in groundwater? In other words, as turbidity varies, so do the concentrations of inorganic chemicals, right?

Response: Yes, turbidity can increase constituent concentrations. The Agency also notes that 80 Fed. Reg., 21403, (Apr. 17, 2015) discusses turbidity as a function of poor monitoring well design.

39. Does turbidity in groundwater vary naturally over time?

Response: Yes. Given this line of questioning, if the Board believes a revision is appropriate, the Agency would support adding turbidity as a general groundwater chemistry constituent, similar to Calcium, required for groundwater monitoring.

40. On page 3 of Mr. Dunaway's pre-filed testimony, he states that "Part 257 uses the value of the MCL, when available, as a [groundwater protection standard]" and "USEPA adopted health-based values" for constituents that do not have MCLs. Under Part 257, isn't it true that, where background concentrations exceed the MCL, the groundwater protection standards are the background concentrations?

Response: Yes.

a. For example, the MCL for arsenic is 0.1 micrograms/liter. If the background concentration at a site for AS is 0.5 micrograms/liter, the groundwater protection standard ("GWPS") for AS at the site under Part 257 is 0.5 micrograms/liter, right? If not, please explain why not.

Response: The Agency notes that the MCL for Arsenic is 0.01 milligrams per liter (10 micrograms per liter), therefore, the Agency will not speculate on the intended example. Regardless of the example concentrations, the GWPS is for the monitored CCR surface impoundment, not necessarily the entire site.

41. Under 257.95(h), the owner or operator establishes GWPS for the Appendix IV constituents, right?

Response: Yes.

42. On page 4 of Mr. Dunaway's testimony, he states that the limits proposed in 845.600(a) "are the lower of the numerical concentrations adopted in Part 257 or the existing Class I GWQS for that parameter." Why did IEPA model the Part 845.600(a) numeric standards on Class I groundwater standards and not Class II, III, or IV?

Response: The Agency used Class I groundwater standards for existing and inactive CCR surface impoundments, because where MCLs exist for Appendix IV constituents, they are the same as Class I numerical values.

a. Is the Agency aware of facilities in Illinois where CCR surface impoundments are not located in areas of Class I groundwater?

Response: Yes.

43. Are the groundwater protection standards set forth in Part 845.600 protective of human health and the environment?

Response: Yes.

44. Will the Part 620 groundwater quality standards remain applicable at sites that have CCR surface impoundments regulated by Part 845?

Response: Part 620 groundwater quality standards will remain in effect for constituents without a GWPS in Part 845.

a. Mr. Dunaway suggests on p. 6 of his testimony that during closure and post- closure care, Part 620 standards are applicable only for constituents not regulated by Part 845. Is that correct?

Response: Yes.

45. The Agency has previously approved GMZs under Part 620 for CCR surface impoundments, correct?

Response: Yes.

a. In each case where a GMZ was issued, did IEPA determine that the approved corrective action and closure would not violate the Illinois Environmental Protection Act or Board regulations?

Response: Yes. However, like any other final determination by the Agency, GMZs are subject to review by the Board.

b. In each instance where a GMZ was issued for a CCR surface impoundment, did IEPA also determine that the approved closure and/or corrective action was protective of human health and the environment?

Response: The Agency determined that the closure and/or corrective action would be protective of human health and the environment at the termination of the GMZ.

c. Isn't it true that some of the closure plans approved by IEPA for CCR surface impoundments predicted that it would take decades for groundwater to meet the groundwater quality standards after closure had been completed?

Response: Yes.

46. Does Part 845 preclude an owner/operator from seeking a GMZ under Part 620?

Response: No.

a. Would a GMZ issued under Part 620 provide relief from the groundwater protection standards set forth in Part 845.600?

Response: No.

47. Are the Part 620 numeric groundwater quality standards more stringent than the CCR Rule's groundwater protection standards? Please explain.

Response: That is a site specific and constituent specific determination.

48. Could groundwater corrective measures implemented pursuant to Part 845 satisfy the groundwater corrective action requirements of Part 620?

Response: Part 620 does not have any corrective action requirements.

49. Could groundwater corrective actions implemented pursuant to Part 620 satisfy the groundwater corrective measure requirements of Part 845?

Response: Potentially, but any corrective action implemented to meet the groundwater quality standards of Part 620 would have to be evaluated consistent with the requirements of Section 845.660.

a. For example, if a site has a GMZ, approved by the Agency under Part 620, and exceedances of the Part 845 groundwater protection standards are detected, could the existing approved measures that are part of the GMZ be used to satisfy the corrective measures requirements of Part 845?

Response: Please see Response 49.

50. Mr. Dunaway, on page 11 of his June 2, 2020 testimony, states that "four sampling events per year is not overly burdensome for owners and operators of CCR surface impoundments." What is the basis for this statement?

Response: When drafting Part 845 the Agency determined that a quarterly monitoring frequency would meet the requirements of Section 22.59 of the Act, while being similar to many other groundwater monitoring programs within the Agency.

a. Has the Agency presented testimony to the Board regarding the cost of each sampling event and the cost of analysis for each of the parameters identified in Part 845.600(a)(1)?

Response: No.

b. What monitoring frequency would be "overly burdensome for owners and operators of CCR surface impoundments?"

Response: The Agency believes a daily frequency would be overly burdensome.

51. Has the Agency previously approved CCR surface impoundment closure applications under Part 620 that allow an owner or operator to reduce the monitoring frequency from quarterly monitoring if certain conditions are achieved?

Response: Yes. If the Board were to propose an alternative to quarterly chemical or monthly elevation monitoring schedules the Agency would consider the alternatives.

52. Mr. Dunaway refers to annual groundwater monitoring reports under 845.610 on pages 7-8 of his testimony, and states that reports are due by

"January 31st of the year following the year that is the subject of the report." When would the first such report be due following the effective date of Part 845?

Response: Based on the requirements of Section 845.550, the first Annual Consolidated Report will be due January 31, 2022.

53. Page 13 of IEPA's Statement of Reasons states "[i]f the groundwater monitoring shows statistically significant increasing constituent concentration over the groundwater protection standards, the owner or operator must perform corrective action." Is that statement consistent with the language of 845.650(d)?

Response: In general, yes, pursuant to Section 845.650(d)(3), but Section 845.650(d)(4) does provide the ability to make an alternative source demonstration.

a. Where in Part 845.650(d) is statistical analysis allowed to determine whether a notification or corrective action is triggered?

Response: Section 845.650(d)(4).

54. Under 257.94 & 257.95 there is a distinction between a statistically significant increase (SSI) and a statistically significant level (SSL), correct?

Response: USEPA uses both terms, but Sections 257.94 and 257.95 do not provide any explanation as to the use of those terms.

a. An SSI is used to assess whether a site goes to assessment monitoring (257.94(e)) and an SSL is used to assess whether a site goes to corrective action (257.95(g)), correct? If not, please explain why not.

Response: USEPA uses those terms as described in Sections 257.94(e) and 267.95(g).

55. On page 3 of Mr. Dunaway's testimony, he states that "Part 257 does not allow the end of post-closure care until the GWPS for both Appendix III and IV have been met,…" Please provide a reference to the specific provision(s) in Part 257 that supports this statement.

Response: Section 257.104(a) requires that post-closure care continue if a CCR surface impoundment is under assessment monitoring at the end of the minimum 30-year, post-closure care period pursuant to Section 257.95. Section 257.95(a) requires assessment monitoring when there is a statistically significant increase of an Appendix III constituent over background. Section 257.95(e) requires that all constituents in Appendix III and Appendix IV be at or below

background to return to detection monitoring. Therefore, under Part 257, until all monitored constituents are at or below background, post-closure care cannot end.

56. Does an owner/operator have the right to appeal an Agency decision to "not concur[]" with the owner/operator's demonstration under Part 845.650(d)(4) that a source other than the CCR surface impoundment is causing the detected exceedances of the groundwater protection standards? If so, please set forth the regulatory and/or statutory authorization for bringing such an appeal.

Response: The Agency's position is that non-concurrence with a demonstration under Section 845.650(d)(4) is a final decision, which can be appealed pursuant to Part 105 of the Board's rules.

57. On page 6 of the ENGO's June 15, 2020 public comments, the ENGOs suggest that owners or operators can "evade corrective action" by making a demonstration that CCR sources other than a CCR surface impoundment at the facility are the source of groundwater contamination. Assuming that fact pattern, could such groundwater contamination be subject to Section 12 of the Environmental Protection Act and Part 620 of the Board's rules?

Response: Yes.

58. Does the Agency agree with the ENGOs that Part 845 as proposed allows owners and operators to "evade" cleaning up groundwater contamination from CCR sources other than CCR surface impoundments?

Response: No.

59. On p. 14 of Mr. Dunaway's testimony, he refers to the requirement that the corrective action plan under Part 845.670 "provide an anticipated schedule for implementing and completing the remedy in consideration of site specific conditions." What types of "site specific conditions" does this refer to?

Response: While not an exhaustive list, common site-specific conditions that may impact corrective action would include the hydraulic conductivity of the sediments, the heterogeneity and thickness of sediment layers, proximity to water bodies, soil stability and facility layout.

a. How might those site specific conditions impact the amount of time required to complete corrective action?

Response: Site specific conditions could increase or decrease the amount of time required to complete corrective action.

60. On Page 8 of the Statement of Reasons IEPA asserts that 415 ILCS 5/22.59(g)

requires the Board's rules to "specify a method to prioritize CCR surface impoundments required to close under the federal CCR rule." 415 ILCS 5/22.59(g)(9) states that the rules must: "specify a method to prioritize CCR surface impoundments required to close under RCRA *if not otherwise specified by the United States Environmental Protection Agency*, so that CCR surface impoundments with the highest risk to public health and the environment, and areas of environmental justice are given first priority." (emphasis added).

a. Does IEPA's proposed closure prioritization apply only to CCR surface impoundments for which a closure schedule has not been established by the CCR Rule?

Response: No.

b. If the Agency intends its prioritization program to apply to CCR surface impoundments for which closure deadlines have already been established under the CCR Rule, does it believe such prioritization is required by 415 5/22.59(g)(9)?

Response: Yes

61. Why did the Agency choose the specific application deadlines set forth in Part 845.700(h)?

Response: The Agency wanted to set a relatively quick schedule that also allowed for a staggered timeframe for applications to be submitted.

62. How many applications does the Agency expect to receive for each category set forth in Part 845.700?

Response: The Agency has not assessed the number of applications it expects to receive in each category.

63. How long does the Agency anticipate will be required to for it to assess each closure application?

Response: The Agency has no way of knowing how long it will take to review any permit application related to closure. Each application will be reviewed on a case by case basis, and there may be a wide variation in the time necessary to review each application.

64. Ms. Zimmer states on page 3 of her testimony that "[t]he timeframes for closure of existing CCR surface impoundments are set up in stages so they do not all occur at once but are staggered." What elements of Part 845 ensure that closures are performed in "stages?"

Response: The Application Schedule for the different prioritization categories in Section 845.700 (h) staggers the submission of the applications for closure or retrofit in 6 month increments. While the closure or retrofits won't all occur on the same schedule, it does allow the initiation of the closure or retrofits to be spread out over a year.

65. Ms. Zimmer, on Page 4 of her testimony, refers to Part 845.700(g) requirements that an owner/operator shall close impoundments in order of priority. What is "closure" under this provision? Does it mean cease receipt of all waste and commence closure activities or complete closure (e.g., installation of a cap or removing all of the CCR)?

Response: "Closure" means the initiation of closure as described in Section 845.730.

66. Has the Agency evaluated how many units in the state fail to meet one or more of the location restrictions listed in proposed Part 845.300 – 845.340?

Response: No. The IEPA does not yet have information on each CCR surface impoundment regarding location restrictions. Each facility will need to make a demonstration as to whether they meet the locations restrictions under Subpart C in the permit application after the regulations are promulgated. At this time, the facilities have not submitted this information to the Agency.

67. Why does the Agency believe failure to demonstrate compliance with a location restriction potentially warrants classifying a unit as Category 2?

Response: Section 22.59 directed the Agency to prioritize based on highest risk to public health and the environment, and areas of environmental justice. Giving priority to surface impoundments that fail to demonstrate compliance with the location restrictions in Subpart C fulfills that mandate.

68. Has the Agency determined whether any CCR surface impoundment in Illinois actually warrants being classified as a Category 2 unit?

Response: No, not at this time.

a. If such a determination has been made, what did the Agency conclude and what was the basis for the conclusion?

Response: Please see Response 68.

b. If no such determination has been made, why not? When does the Agency anticipate making such designations, if any?

Response: Such a determination will be made when the Agency becomes aware of information that leads it to believe an impoundment is an imminent threat to human health or the environment after a determination is made by the owner or operator to determine the appropriate CCR surface impoundment categories.

69. What factors will the Agency use to determine whether a CCR surface impoundment is an "immediate danger to public health or welfare, or the environment" warranting a Category 2 designation?

Response: This will be determined on a case by case basis. However, the Agency may designate a CCR surface impoundment as a Category 2 surface impoundment when any of the criteria in 845.700(g)(5) have been met.

70. Does the CCR Rule require owners/operators to perform a closure alternatives analysis?

Response: No, Section 22.59(d) requires the submission of a closure alternatives analysis to the Agency for approval.

71. Does IEPA believe the factors listed in Part 845.710 are sufficient to assess and ensure that potential closures are protective of human health and the environment?

Response: Yes, the Agency believes Section 845.710 is sufficient to assess and ensure that closures are protective of human health and the environment. However, Section 845.710 provides a list of the factors that must be considered, but does not necessarily preclude other site specific information from consideration.

72. Do the factors listed in Part 845.710 allow for consideration of all site-specific factors that could impact or influence the closure analysis for each CCR surface impoundment?

Response: Please see Response 71.

73. Does IEPA believe the factors listed in Part 845.710 present a process for selecting appropriate closures that can account for all site-specific factors that may exist at each of the CCR surface impoundments subject to Part 845?

Response: Please see Response 71.

74. U.S. EPA stated in the 2015 preamble to the CCR Rule that closure-in-place and closure-by-removal, if conducted properly, "can be equally protective" of

human health and the environment, correct? (80 Fed. Reg. at 21,412).

Response: Yes.

75. Please identify any regulatory programs that regulate the transportation of CCR offsite from the facility where it was generated and state whether any such programs are administered by IEPA.

Response: The Agency is not aware of any such program.

76. Has the Agency performed any assessment to determine what final cover system requirements are appropriate for CCR surface impoundments in Illinois? If so, please explain the Agency's findings.

Response: The Agency has not completed a comparative assessment of different cover systems in different hydrogeologic settings.

77. What resources did the Agency use to develop the final cover standards included in proposed Part 845.750?

Response: The Agency used the final cover standards for landfills as specified in 35 Ill. Adm. Code Part 811.314.

78. The final cover system requirements proposed in Part 845.750 are more stringent than those required by the CCR Rule in 40 CFR 257.102, correct?

Response: Yes.

79. Did IEPA perform an evaluation or analysis to assess the efficacy of the cover system requirements set forth in 40 CFR 257.102? If so, please explain the Agency's findings?

Response: Please see Response 76.

80. Has the Agency evaluated the cost implications of requiring a cover system that is thicker and less permeable than what is required by the CCR Rule? If so, please explain the Agency's findings.

Response: No.

81. The Agency, in connection with GMZ and closure applications under Part 620, has previously approved cover systems for CCR surface impoundments that do not meet the cover system requirements proposed in Part 845.750, correct?

Response: Yes.

a. Does the Agency have any information demonstrating that cover systems it approved prior to proposing Part 845 are inadequate to protect human health or the environment? If so, please provide that information.

Response: No.

82. Part 845 would require a 3-foot thick protective layer regardless of whether a geomembrane or compacted earth are used for the low permeability layer, correct?

Response: Yes, unless the owner or operator demonstrates another final protective layer construction technique or material provides equivalent or superior performance.

a. **Part 845.750(c)(2)(B) states that the final protective layer must "be sufficient to protect the low permeability layer from freezing. . . ." Does the Agency have evidence that geomembranes are vulnerable to damage as a result of freeze/thaw cycles when used in final cover systems?**

Response: This is standard language in 35 Ill. Adm. Code Part 811.314.

83. Agency approved final cover systems have been completed for CCR surface impoundments located at the Havana, Hutsonville, and Venice power stations, correct?

Response: Yes, the Agency approved final cover systems have been completed for CCR surface impoundments located at the Havana, Hutsonville, and Venice power stations.

a. Has the Agency reviewed groundwater monitoring data that postdates the completion of final cover systems for each of these impoundments?

Response: Yes.

b) After reviewing groundwater monitoring data from each of these impoundments following the completion of final cover systems, has the Agency required any further groundwater corrective action associated with CCR surface impoundments at any of these three sites?

Response: The Agency required corrective action concurrently with closure at Hutsonville. To date, the Agency has not required further groundwater corrective action associated with CCR surface impoundments at Havana and Venice.

c) Of these three, the Havana South Ash Pond system has been closed the longest, correct?

Response: Yes

d)Does groundwater data for the CCR Havana South Ash Pond demonstrate that closure-in-place achieved compliance with the applicable Part 620 groundwater quality standards?

Response: Yes

e) Does groundwater data for the CCR Havana South Ash Pond demonstrate that closure-in-place can mitigate and control groundwater contamination from a CCR surface impoundment?

Response: Groundwater data for the CCR Havana South Ash Pond demonstrates that on a site specific basis, closure-in-place can mitigate groundwater contamination at a CCR impoundment.

84. In the past, under the Part 620 groundwater management zone ("GMZ") program, has IEPA approved monitored natural attenuation as a component of corrective action to address groundwater contamination associated with CCR surface impoundments in Illinois?

Response: Yes.

CERTIFICATE OF SERVICE

I, the undersigned, on affirmation state the following:

That I have served the attached **NOTICE OF FILING** and **FIRST SUPPLEMENT TO IEPA'S PRE-FILED ANSWERS** by e-mail upon Don Brown at the e-mail address of don.brown@illinois.gov, upon Renee Snow at the e-mail address of Renee.Snow@Illinois.Gov, upon Matt Dunn at the e-mail address of mdunn@atg.state.il.us, upon Stephen Sylvester at the e-mail address of ssylvester@atg.state.il.us, upon Andrew Armstrong at the e-mail address of aarmstrong@atg.state.il.us, upon Kathryn A. Pamenter at the e-mail address of KPamenter@atg.state.il.us, upon Virginia I. Yang at the e-mail address of virginia.yang@illinois.gov, upon Nick San Diego at the e-mail address of nick.sandiego@illinois.gov, upon Robert G. Mool at the e-mail address of bob.mool@illinois.gov, upon Vanessa Horton at the e-mail address of Vanessa.Horton@Illinois.gov, upon Paul Mauer at the e-mail address of Paul.Mauer@illinois.gov, upon Deborah Williams at the e-mail address of Deborah.Williams@cwlp.com, upon Kim Knowles at the e-mail address of Kknowles@prairierivers.org, upon Andrew Rehn at the e-mail address of Arehn@prairierivers.org, upon Faith Bugel at the e-mail address of fbugel@gmail.com, upon Jeffrey Hammons at the e-mail address of Jhammons@elpc.org, upon Keith Harley at the e-mail address of kharley@kentlaw.edu, upon Daryl Grable at the e-mail address of dgrable@clclaw.org, upon Michael Smallwood at the e-mail address of Msmallwood@ameren.com, upon Mark A. Bilut at the e-mail address of Mbilut@mwe.com, upon Abel Russ at the e-mail address of aruss@environmentalintegrity.org, upon Susan M. Franzetti at the e-mail address of Sf@nijmanfranzetti.com, upon Kristen Laughridge Gale at the e-mail address of kg@nijmanfranzetti.com, upon Vincent R. Angermeier at the e-mail address of va@nijmanfranzetti.com, upon Alec M. Davis at the e-mail address of adavis@ierg.org, upon Jennifer M. Martin at the e-mail address of Jmartin@heplerbroom.com, upon Kelly Thompson at the e-mail address of kthompson@ierg.org, upon Walter Stone at the e-mail address of Walter.stone@nrgenergy.com, upon Cynthia Skrukrud at the e-mail address of Cynthia.Skrukrud@sierraclub.org, upon Jack Darin at the e-mail address of Jack.Darin@sierraclub.org, upon Christine Nannicelli at the e-mail address of christine.nannicelli@sierraclub.org, upon Stephen J. Bonebrake at the e-mail address of bonebrake@schiffhardin.com, upon Joshua R. More at the e-mail address of jmore@schiffhardin.com, upon Ryan C. Granholm at the e-mail address of rgranholm@schiffhardin.com, upon N. LaDonna Driver at the e-mail address of LaDonna.Driver@heplerbroom.com, upon Alisha Anker at the e-mail address of aanker@ppi.coop, upon Chris Newman at the e-mail address of newman.christopherm@epa.gov, upon Claire A. Manning at the e-mail address of cmanning@bhslaw.com, upon Anthony D. Schuering at the e-mail address of aschuering@bhslaw.com, upon Jennifer Cassel at the e-mail address of jcassel@earthjustice.org, upon Melissa Brown at the e-mail address of Melissa.Brown@heplerbroom.com, upon Thomas Cmar at the e-mail address of tcmar@earthjustice.org , upon Melissa Legge at the e-mail address of mlegge@earthjustice.org, upon Mychal Ozaeta at the e-mail address of mozaeta@earthjustice.org, upon Michael L Raiff at the e-mail address of mraiff@gibsondunn.com

That my e-mail address is Christine.Zeivel@illinois.gov

That the e-mail transmission took place before 4:30 p.m. on the date of August 5.

/s/ Christine Zeivel
August 5, 2020