

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
) R14-10
COAL COMBUSTION WASTE (CCW))
SURFACE IMPOUNDMENTS AT POWER) (Rulemaking- Water)
GENERATING FACILITIES: PROPOSED)
NEW 35 ILL. ADM. CODE 841)

NOTICE OF FILING

PLEASE TAKE NOTICE that I have filed today with the Illinois Pollution Control Board ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S PREFILED QUESTIONS FOR THE ENVIRONMENTAL GROUPS, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/Joanne M. Olson
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Date: June 11, 2014

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**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S
PREFILED QUESTIONS FOR THE ENVIRONMENTAL GROUPS**

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, (Illinois EPA or Agency) by and through its counsel, and hereby submits prefiled questions for Environmental Groups. Illinois EPA requests that the Hearing Officer allow follow-up questioning to be posed based on the answers provided.

APPLICABILITY

1. Please explain what surface impoundments fall within the applicability of the Environmental Groups' counter proposal.
2. Please explain whether unpermitted landfills are within the applicability of the Environmental Groups' counter proposal.
 - 2.1 If any landfills are subject to the proposed part, please provide a list of all landfill facilities in Illinois to which this proposed Part would apply.
3. Under the Environmental Groups' counter proposal, if a site only has a single CCW surface impoundment, must the owner or operator complete a hydrogeologic site characterization, groundwater monitoring plan, and statistical analysis if the CCW surface impoundment is exempt pursuant to proposed Section 841.105(b)?
4. Are exempt CCW surface impoundments required to conduct routine groundwater monitoring under the Environmental Groups' proposal? If so, how frequently, and for which parameters?
5. In proposed Section 841.105(c), any unit that is exempt from the requirements of this proposed Part must maintain records demonstrating the basis for its exemption. How would this requirement apply to Hutsonville Ash Pond D, which is subject to a site-specific rulemaking (35 Ill. Adm. Code 840)?

6. Please explain the purpose and effect of the Environmental Groups' proposed revisions to the definition of surface impoundment.
 - 6.1 Why was the requirement that a surface impoundment derive its structural integrity from earthen materials deleted?
 - 6.2 Do the Environmental Groups intend tanks, piping or leachate collection systems to be included in the definition of surface impoundment?
 - 6.3 Would a ditch or drainage conveyance system that transfers wastewater be considered a surface impoundment under the Environmental Groups' proposal?
7. Please explain the purpose and effect of the definition of "operate."
 - 7.1 Does the proposed definition of "operate" expand the scope of the rule to include any surface impoundment containing CCW or leachate from CCW that is open to the atmosphere? If not, what is meant by "receiving stormwater as direct precipitation"?
 - 7.2 Why do the Environmental Groups consider rain falling as direct precipitation to be a waste?
 - 7.3 Are you aware of any other regulations, state or federal, where operate is defined as any unit as open to the atmosphere.

MONITORING

8. What are water fluxes as it relates to groundwater and surface water interaction?
9. Are modeling and monitoring well networks two of the methods to assess flux between surface water and groundwater described in "Field Techniques for Estimating Water Fluxes Between Surface Water and Ground Water" Techniques and Methods 4-D2 (2008), which you have proposed to incorporate by reference?
 - 9.1 Are monitoring and modeling required by the Agency's proposal?
10. Please describe the method of obtaining the best sample of water from the hyporheic zone?
 - 10.1 How does one prevent cross-contamination with surface water when collecting a sample from the hyporheic zone?
 - 10.2 How does one know whether cross contamination with surface water has occurred?

- 10.3 Has anyone testifying on behalf of the Environmental Groups sampled pore water in the hypohreic zone?
- 10.4 In cases where an engineered barrier is present, and groundwater monitoring shows no exceedence of a groundwater quality standard, what is the purpose of hyporheic monitoring?
11. Can the Agency request additional information from an owner or operator regarding a plan submitted for review under its proposal?
12. Would a requirement for an owner or operator to complete contaminant transport modeling when doing a corrective action or prior to closure be a reasonable substitute for a hyporheic zone monitoring?
 - 12.1. If no, please explain why.
13. Do any units that would be subject to the Environmental Groups' proposal currently have groundwater monitoring systems that are equipped to determine the potential for any release of a contaminant to surface water?
 - 13.1 If so, what units are so equipped?
 - 13.2 If not, have the Environmental Groups conducted an economic analysis to determine the costs of including such a requirement? If the Environmental Groups have conducted such an analysis, could it provide that analysis?
14. In the Environmental Groups' proposed Section 841.200(c)(4), an owner or operator must identify all down gradient or downstream community water supplies. What distance downstream or down gradient is intended here?
15. In the Environmental Groups' proposed Section 841.200(c)(3), an owner or operator must identify nearby surface water bodies and down gradient hyporheic zones. What is meant by "nearby"?
16. In the Environmental Groups' proposed Section 841.200(c)(5), an owner or operator must identify any potential hydrologic connection between the unit and nearby surface water bodies and pumping wells. What is meant by "nearby"?
 - 16.1 What is mean by "any potential hydrologic connection"?
 - 16.2 Must the hydrologic connection be significant?
 - 16.3 Can the Environmental Groups identify a specific hydraulic conductivity which quantifies what is meant by "hydrologic connection"?

- 16.4 Is it possible that engineered barriers such as a liner would sever any hydrologic connection between a unit and surface water body?
17. Proposed Section 841.210(b)(3)(B)(i) requires each groundwater monitoring plan to include "the date or anticipated date of the installation of any pollution control technology that affected, or will affect the type or composition of coal combustion waste received by the unit." Please explain how the Agency can adequately review a plan that requires an owner or operator to speculate as to the nature and timing of future regulations, the technology that might be required and the impact the technology may have on CCW characteristics?
- 17.1 Would the following be a better approach?

Section 841.210(b)(3)(B)

- B) a description of the contents of each unit, specifying, to the extent practicable and where such information is available:
- i) the date when each unit began receiving coal combustion waste, or leachate from coal combustion waste,
 - ii) ~~and the date or anticipated date~~ of the installation of any pollution control technology that ~~affects~~affected, ~~or will affect~~, the type or composition of coal combustion waste received by the unit;
 - iii) ~~ii)~~ changes in the coal source (e.g. Powder River Basin versus Illinois Basin) including dates and/or tons of material from each coal source;
 - iv) ~~iii)~~ changes in the type of coal combustion waste, or leachate deposited (e.g. fly ash versus flue gas desulfurization sludge) including dates and/or tons of each material deposited; and
 - v) ~~iv)~~ if applicable, the date when the unit stopped receiving coal combustion waste or leachate.

Section 841.210(f)

- f) When pollution control technology that affects the type or composition of coal combustion waste received by the unit is installed, the owner or operator shall update the groundwater monitoring plan to include the date of installation.
- g) The groundwater monitoring plan and any modifications to the groundwater monitoring plan must be approved by the Agency pursuant to Subpart E of this Part.

18. Please explain why the owner or operator should not supply the Agency with an explanation of the sample size, sample procedure and statistical method for compliance monitoring? See proposed changes to Section 841.210(b)(7).

CORRECTIVE ACTION:

19. Please list any other regulatory program, state or federal, that requires closure when there has been a release from a surface impoundment or landfill causing groundwater contamination and does not allow corrective action to achieve compliance.
20. Please explain the purpose of the corrective action process when closure must be initiated after a confirmed exceedence of the groundwater quality standards pursuant to the Environmental Groups' proposed Section 841.300.
21. Can a CCW surface impoundment achieve compliance with the groundwater quality standards through corrective action alone?
- 21.1 In cases where compliance with the groundwater quality standards can be obtained through corrective action, why do the Environmental Groups propose mandatory closure when a release attributable to the CCW surface impoundment has caused an exceedence of the groundwater quality standards?
- 21.2 Do you agree that the groundwater quality standards are established at concentrations that are protective of human health and the environment?
- 21.3 If a corrective action results boron concentrations equal to groundwater quality standard, 2 mililigrams per liter (mg/l) (the most mobile contaminant in groundwater), is it likely that the other chemical constituents will be reduced?
- 21.4 Is it true that the Class I groundwater quality standard for boron is more stringent than the chronic general use surface water quality standard for boron?
22. If closure is required when there is an exceedence of the groundwater quality standards, why do the Environmental Groups require an assessment of all the possible corrective actions in proposed Section 841.310(e)(5)?
- 22.1 Is it the Environmental Groups' expectation that some corrective actions will achieve groundwater quality standards, and therefore closure is not required?
- 22.2 Should the Agency review corrective action alternatives that an owner or operator has determined will not be successful in achieving compliance? If so, please explain why.
23. What standard is used to determine the extent to which a corrective action protects human health and the environment.

ALTERNATIVE CAUSE DEMONSTRATION:

24. Do the Environmental Groups propose requiring an owner or operator of a CCW surface impoundment to identify the specific cause of contamination even if that cause is offsite?
- 24.1 If yes, please explain the legal authority of an owner or operator to conduct investigations on property owned by another.
- 24.2 If the owner or operator of a CCW surface impoundment was denied access to an offsite property and, as a result, was unable to identify the specific alternative contamination source, would the owner or operator be unable to make an alternative cause demonstration?
- 24.3 Under the facts described in question 24.2, would the owner or operator be required to close the CCW surface impoundment under the Environmental Groups' proposal?
25. If two CCW surface impoundments up-gradient from a compliance point each have a release of the same contaminant, is it possible, in all cases, to determine which CCW surface impoundment caused an exceedence of the groundwater quality standards at the compliance point?
- 25.1 If it is not possible to determine which unit caused the exceedence, would both CCW surface impoundments have to close under the Environmental Groups' proposal?
26. Is it possible for naturally occurring concentrations in groundwater to increase naturally?
- 26.1 Is it possible the natural increase could occur after the background concentration has been established?
- 26.2 If the background concentration for a particular contaminant has been established at levels lower than the groundwater quality standards, should an owner or operator be precluded from showing any future exceedence of the numeric groundwater quality standards listed in Part 620.Subpart D is from natural causes?
- 26.3 If the Environmental Groups' answer to question 26.1 is yes, please explain.
- 26.4 If the Environmental Groups' answer to question 26.1 is no, please explain how the Illinois EPA's proposal regarding alternative cause demonstration "directly contradicts" the groundwater quality standards, as stated on page 18 of the Environmental Groups' Post Hearing Comments, filed June 9, 2014.
27. Is an alternative cause demonstration required when a constituent has a statistically significant increase, but does not exceed the numerical groundwater quality standard?

28. Is it true that the monitoring conducted from a high production community water supply well can mask groundwater chemical constituent levels?
29. Are the Environmental Groups aware that the numerical groundwater quality standards, which apply except due to natural causes, for Total Dissolved Solids (TDS) and Sulfates are based on the statewide background data collected from the Illinois EPA's ambient network of community water supply (CWS) wells?
30. If the natural occurring level of TDS and Sulfate at a site is below the respective numerical groundwater quality standards in Part 620, how would the Environmental Groups envision that the state wide background data collected from the ambient network of CWS wells be used to compare to naturally occurring background?

COMPLIANCE PERIOD:

31. If all closure plans and post closure plans for existing CCW surface impoundments are submitted within one year of the effective date of the rule, should the Agency be afforded more time to review these additional documents?
 - 31.1 Have the Environmental Groups considered the impact to the Agency in reviewing and public noticing closure plans and post closure plans for all CCW surface impoundments, when these plans are submitted simultaneously within one year of the effective date of the proposed rule?
32. When must new facilities submit a closure plan?
 - 32.1 Where does the rule proposed by the Environmental Groups reflect this requirement?
33. If circumstances at the facility change and modifications to the closure plan or post closure plan are needed, would the Agency need to review the closure plan or post closure plan again?
34. How many times do the Environmental Groups anticipate the Agency must review the closure plan before a facility actually commences closure?
 - 34.1 Can the Environmental Groups provide an estimate of how long an existing CCW surface impoundment will remain operating after the approval of the closure plan?
 - 34.2 Can the Environmental Groups provide an estimate of how long a new CCW surface impoundment will remain operating after the approval of the closure plan?
35. Have the Environmental Groups performed an economic analysis of the impact of requiring all CCW surface impoundments to submit a closure plan within one year of the effective date of the proposed regulations?

SURFACE IMPOUNDMENT CLOSURE:

36. What is the economic impact of mandating closure for all units that have caused an exceedence of the groundwater quality standards at a compliance point?
37. Does U.S. EPA's proposal for CCW surface impoundments contain a presumption that the surface impoundment be closed by removal?
 - 37.1 Please identify other state regulatory programs containing a presumption that CCW surface impoundments will be closed by removal when there is an exceedence of the applicable groundwater quality standard?
38. Under the Environmental Groups' proposal, would an owner or operator be required to close its CCW surface impoundment by removal of all coal ash if removal of coal ash and closure by some other means are equally protective of human health and the environment?
39. On page 2 of the Environmental Groups' Post Hearing Comments, the following statement is made: "If the Agency concludes in a particular case that closure by removal is technically feasible and would clearly afford more protection to human health and the environment, then closure should be by removal." Is the standard by which the Agency must evaluate closure plans whether a particular plan "clearly affords more protection"?
 - 39.1 If yes, please explain how the Agency should implement this standard?
 - 39.2 If no, please explain the appropriate standard by which the Agency will determine whether one closure plan is more protective of human health and the environment than another closure plan?
40. On page 4 of the Environmental Groups' Post Hearing Comments, the following statement is made: "Closure by removal is increasingly employed in other states as a safe and economical method of dealing with CCW impoundments. For example, Santee Cooper, a South Carolina utility, agreed in November 2013 to remove 1.3 million tons of coal ash from ponds at its Grainger plant in Conway, South Carolina, through a plan that a Santee Cooper executive described as "cost-effective". Steve Jones, Santee Cooper to empty Grainger ash ponds in Conway, Myrtle Beach Sun News (Nov. 19, 2013), available at <http://www.myrtlebeachonline.com/2013/11/19/3849209/santee-cooper-to-empty-grainger.html>. Large-scale removal of coal combustion waste presents difficulties, but is far from impossible." How long will it take to remove 1.3 million tons of coal ash from the impoundments?
 - 40.1 In the above cited article, the owner of the utility is quoted as follows: "It is cost effective, which means it is responsive to our customers' best interest." What are the specific facts that support the utility's statement that removal of 1.3 million tons of coal ash is cost effective?

- 40.2 Isn't it true that the same article also indicates that a contract for a new \$40,000,000 recycling facility is being built?
- 40.3 Is it also true that this recycling facility is located only 36 miles away?
- 40.4 Even though this recycling plant is only located 36 miles away, is it true that it will take 10-15 years to remove 1.3 million tons of coal ash from the Grainger electric generating plant?
- 40.5 Is it true that the down gradient monitoring wells at Grainger plant in Conway, South Carolina ash ponds show exceedances for arsenic?
- 40.6 How many down gradient monitoring wells associated with CCW surface impoundments in Illinois have shown arsenic groundwater standards exceedences?
- 40.7 The Santee Cooper article states: "The settlement agreement says that Santee Cooper shall continue to monitor the area for contamination during the removal process and report its findings every six months to the S.C. Department of Health and Environmental Control and lawyers representing the environmental groups. The groups have agreed not only to dismiss the current lawsuits but also bar any future litigation even if future findings change the current picture of contamination to the groundwater or river." Is it possible that contamination levels could get worse in the groundwater and surface water while removal is occurring?
41. On page 6 of the Post Hearing Comments filed by the Environmental Groups the following statement is made: "The Environmental Groups reiterate their position at hearing that, while engineering measures may be available to address the conditions in (b)(3) (mines, voids or other unstable terrain), the long-term concerns posed by the conditions in (b)(1) and (2) preclude engineering solutions." Please explain why engineering controls should be precluded from surface impoundments in the 100 yr flood plain and the water table?
- 41.1 Please explain why engineering controls should be precluded in instances when CCW is present in the water table.
- 41.2 Why is closure by removal preferred by the Environmental Groups over the use of engineering measures to insure structural integrity and compliance with standards?
- 41.3 How does one determine whether CCW from a particular unit is present in the water table?

- 41.4 Would Section 841.400(b)(1) be applicable if the CCW in the water table is from a source other than the unit?
- 41.5 For the purposes of the Environmental Groups' proposal, if a wetland has been altered by construction or other industrial activity such that it no longer supports vegetation typically adapted for life in saturated soils, is it still a wetland and the requirements of proposed Section 841.400(b)(2) apply?
- 41.6 Are you aware of any active municipal solid waste landfills constructed over a mine tunnel?
42. On page 18 of the Environmental Groups' Post Hearing Comments, the following statements are made: "The Environmental Groups also propose the addition of a requirement that the failure of corrective action to promptly control contamination triggers a requirement of closure. See Ex. 1, Section 841.405(a)(2)(B). The Agency's proposed rule allows continued contamination of groundwater, putting it into conflict with the Illinois Groundwater Protection Act, 415 ILCS 55/2(b), because the Agency's rule lacks provisions to address ongoing contamination from impoundments where there has been an unsuccessful attempt at corrective action. Consequently, the Board should adopt a rule that contains a requirement for closure where the owner operator fails to implement a viable corrective action plan." What do you mean by failure of corrective action? What constitutes a failed corrective action?
- 42.1 What do you mean by "promptly"?
- 42.2 On average, how long does it take to cap a surface impoundment?
- 42.3 Can the Environmental Groups describe how removal is prompt in comparison to alternative corrective action or closure measures designed to achieve the Board's groundwater quality standards?
- 42.4 How does proposed Section 841.405(a)(2)(B) reflect the above additional requirement?
- 42.5 What is meant by "viable corrective action plan?"
- 42.6 What is required under Part 620 when the appropriate groundwater quality standards cannot be achieved?
- 42.7 Can the Environmental Groups explain whether 35 Ill. Adm. Code 620.450(a)(4)(B) is consistent with the Illinois Groundwater Protection Act?
43. What facilities in Illinois are permitted to accept CCW that has been removed from a CCW surface impoundment?
- 43.1 Must the CCW be dewatered before these facilities will accept the CCW?

- 43.2 Do you anticipate facilities in Illinois will have to be built to accommodate all the CCW removed from surface impoundments under the Environmental Groups' proposal?
- 43.3 Is a CCW surface impoundment still required to close by removal if the existing facilities permitted to accept CCW do not have space available for the CCW?
44. Have the Environmental Groups conducted an economic analysis of the cost of removing CCW from surface impoundments relative to the cost of closing surface impoundments with CCW left in place? If so, could the Environmental Groups please provide that information.
45. How long, generally speaking, will it take to close a 60 acre CCW surface impoundment that is 20 feet deep?
- 45.1 Is it possible to close the above described unit within five years of submission of the groundwater monitoring results confirming an exceedence of the groundwater quality standards? If so, how much CCW must be removed per day?
- 45.2 What impacts will occur to groundwater during this removal period?
- 45.3 While the removal process is on-going, is the CCW in the impoundments exposed to recharge, and thereby continuing or exelling transport of pollutants to the groundwater?
46. On page 2 of the Environmental Groups' Post Hearing Comments, the following statements are made: "It is clear that the State's CCW impoundments will need to be dealt with, and sooner rather than later. Putting in place plans for doing so now, in conjunction with financial assurance designed to ensure that adequate resources are available to carry out the plans, is a much more reasonable way to deal with the impoundments than continuing to deferring the problem." Isn't it true that removal of all CCW waste may take decades?
- 46.1 Does requiring a unit to undertake corrective action that results in compliance with the groundwater quality standards "defer" the problem of the State's CCW surface impoundments? If so, how?
47. Can waste stored in landfills be recycled or reused?
- 47.1 Do landfills have multiple ways to close, which could include capping, removal, recycling or reuse?
- 47.2 Are landfills in Illinois required to close by removal?
48. Please define "technically infeasible" as the phrase is used in proposed Section 841.400?

- 48.1 Would it be technically infeasible if a CCW surface impoundment that is closing by removal is unable to locate a landfill to accept the dewatered CCW, and a new landfill cannot be constructed within the 5 years following the confirmation of a groundwater quality standard exceedence?
49. Do the Environmental Groups know which CCW surface impoundments in Illinois could close by means other than removal under their proposal?
50. The Environmental Groups proposed the following revision to Section 841.405(a)(1)(A): "Category 1 applies where an existing potable water supply well or is impacted by a release attributable to the unit." What is the purpose of this revision?
51. The Environmental Groups propose in Section 841.405(a)(1)(C) to require a CCW surface impoundment to close "within two years of the Agency's approval of the closure plan, or within two years of notice that an impact on an existing potable water supply has occurred, whichever occurs later, unless the Agency approves a longer timeline." Please explain the purpose and intent of this language.
- 51.1 Do the Environmental Groups intend to require closure of CCW surface impoundments that are near, but did not cause, an impact on an existing potable water supply well?
- 51.2 If the Board were to adopt this revision, should it be revised to state "...or within two years of notice that a release attributable to the unit caused an impact on an existing potable water supply ~~has occurred~~. . ."?
52. Please explain why the Environmental Groups proposed eliminating the distinction between active and inactive CCW surface impoundments in the Agency's proposed Section 841.405(a)(2), (3) and (4).
53. The Environmental Groups proposes revising Section 841.405(a)(2) to require a CCW surface impoundment with a confirmed exceedence to close "within five years of the Agency's approval of a closure plan, or within five years of the submission of groundwater monitoring results that confirm an exceedence of the applicable groundwater standards, whichever is later. The requirement to close the impoundment following the exceedence is waived if no groundwater quality standard is exceeded for four consecutive quarters following the groundwater monitoring results confirming the exceedence."
- 53.1 Under the Environmental Groups' proposal, if a CCW surface impoundment with a confirmed exceedence seeks an alternative cause demonstration with which the Agency does not concur, must the owner or operator of that CCW surface impoundment initiate closure within 90 days of the Agency's non-concurrence in accordance with Section 841.305(c)(1)?

- 53.2 Under the scenario above, could the owner or operator elect not to close in order to obtain four quarters of monitoring data to determine whether it may avoid closure under Section 841.405(a)(2)? If so, what provision in ELPC's proposal would allow this?
- 53.3 If an owner or operator was required to proceed under Section 841.305(c)(1) and initiate closure, could it cease closure and resume operation if, after four quarters, no exceedences of the groundwater quality standards were detected?
- 53.4 If a unit is not required to close if it does not have a release that contributes to an exceedence for four consecutive quarters, why must an owner or operator of a CCW surface impoundment prepare a closure plan within one year of the proposed regulations becoming effective?
53. Is it the Environmental Groups' intent that all CCW surface impoundments, not already required to close under a shorter schedule pursuant to 841.405(a)(1), be closed within five years?
54. Proposed Section 841.405(a)(2)(B) provides: "The unit shall be closed within five years of the Agency's approval of the closure plan, or within five years from the submission of groundwater monitoring results confirming an exceedence of the applicable groundwater quality standard attributable to a release from the unit at an approved compliance point, whichever occurs later." What is meant by the phrase "applicable groundwater quality standard?"
- 54.1 Do you mean the numeric groundwater quality standards contained in Part 620 Subpart D, or do you mean the nondegradation provisions of Part 620 Subpart C?
55. If an owner or operator plans to close a CCW surface impoundment by removal, is the surface impoundment considered a "waste disposal operation"? If yes, please explain.
56. On Page 4, you state: "First, the Environmental Groups propose that, in all cases, closure of surface impoundments should be accomplished by the removal of all coal combustion waste and leachate from the impoundment unless the Agency determines that such removal is technically infeasible or would not result in greater protection of human health and the environment." Is this more stringent than U.S.EPA's proposal?
57. Should existing CCW surface impoundments relined pursuant to the Environmental Groups' design criteria be required to close if there is an exceedence of the groundwater quality standards?
- 57.1 When would the relined CCW surface impoundment be required to close if there is no groundwater exceedence?
58. Is a closure alternative that can reasonably be expected to meet groundwater quality standards adequate to allow closure in place? Why or why not?

59. To your knowledge do municipal solid waste (MSW) landfills ever have releases to groundwater?
- 59.1 Are MSW landfills required to initiate closure by removal if they have a release to groundwater?
- 59.2 Are MSW landfills with no known releases to groundwater required to initiate closure by removal?
- 59.3 Are you aware of any MSW landfill that has been closed by removal?
61. Are the low permeability cover requirements of the proposed Section 841.420 substantially the same as the requirements of 35 Ill. Adm. Code 814?
62. Please explain why it is not appropriate for CCW surface impoundments to close with a low permeability cover that mimics a MSW landfill cover
- 62.1 Would closure like MSW landfills be appropriate if the CCW surface impoundment was lined in substantially the same manner as MSW landfill?

STATISTICAL ANALYSIS:

63. In response to Ms. Franzetti's question (Hrg. Trans. May 14, 2014, 175:8-12), Dr. Soderberg testified that the Environmental Groups' proposal clarified parts of the statistical analysis in Section 841.225(c) by adding a minimum sample size (i.e. minimum of eight data points). Is it the Environmental Groups' intent that submission of a statistical analysis as required in proposed 841.235(3)(g) be done only each time eight additional data points are collected for a well?
64. The Unified Guidance 2009 recommends recalculation of background chemical concentrations every one to three years. Please explain why it would be appropriate to do a statistical comparison of compliance monitoring on what in many cases will be a quarterly basis, when the background concentration to which the data is being compared will only be recalculated every one to three years?
65. Please explain the rationale for decreasing the time allowed for submission of a preventive response plan from 180 to 90 days.
- 65.1 Has anyone testifying on behalf of the Environmental Groups preformed modeling as required under proposed section 841.235(c)(2)(B)?
- 65.2 If so, how long did the modeling take?
- 65.3 Is it possible for complicated sites that the modeling could take upwards of 180 days?

66. Please explain when preventive response would be required under the Environmental Groups' proposal.
- 66.1 Under the Environmental Groups' proposal, how does the class of groundwater impact whether a preventive response is required?
- 66.2 Would you expect groundwater within the spoil of a surface coal mine or former surface mine to have good groundwater quality?
- 66.3 Is the groundwater quality within the spoil of a surface coal mine or former surface mine generally fit for human consumption in accordance with accepted water supply principles and practices?
- 66.4 How many Class III groundwater areas are located in the spoil of a surface coal mine or former surface mine?
- 66.5 Is it practical to treat groundwater within the spoil of a surface coal mine or former surface mine for use by a private well owner?
- 66.6 Is the groundwater classification system adopted by the Board under Part 620 consistent with Section (8)(b)(2) of the Illinois Groundwater Protection Act?
- 66.7 Do you believe that groundwater within non-aquifer materials requires the same level of protection as the groundwater contained in aquifer materials?
- 66.8 Isn't it true that the susceptibility of groundwater contamination is less in saturated geologic material with hydraulic conductivity (k) less than 1×10^{-4} centimeters per second (cm/sec) versus saturated geologic materials with a k greater than or equal to 1×10^{-4} cm/sec?
- 66.9 Should the Agency expend the same resources on groundwater that is of limited quality or quantity as would be expended on protecting a high quality sand and gravel or bedrock aquifer?
- 66.10 Please provide an environmental or technical justification for requiring a preventive a response plan to be developed following impacts to Class IV groundwater.
67. Do the Environmental Groups propose that a CCW surface impoundment with quarterly monitoring submit a potentiometric surface map every quarter?
- 67.1 What is the intended purpose, effect and cost of this requirement?

FINAL SLOPE AND STABILIZATION:

68. For CCW surface impoundments being capped, how should the slopes that promote storm water run-off be formed?
69. On page 19 of their Post Hearing Comments, the Environmental Groups state: "None of the requirements referenced in the Agency's prefiled questions on this topic and none of the requirements of Sectoin 841.415 on Final Slope and Stabilization or Sectoin 841.420 on Final Cover System actually require a final cover system to eliminate exposed CCW used for the final grade and slope or address that CCW that may be exposed on the berms." Please explain how CCW used to establish the final grade would be exposed when the final cover must consist of a low permeability layer and a final protective layer that is at least three feet thick?
- 69.1 The Agency is not aware of CCW surface impoundment berms being constructed with CCW. Are the Environmental Groups aware of CCW surface impoundment berms being constructed with CCW?
- 69.2 If no CCW surface impoundment berms are constructed with CCW, do the Environmental Groups still have a concern about CCW being exposed on the berms?

MODIFICATION OF EXISTING PERMITS:

70. Please explain why it would be necessary to revise a closure, corrective action or preventive response plan if an NPDES or operating permit is denied, instead of modifying the permit that was denied.

STATISTICAL METHODS:

71. Please explain why an owner or operator should not specify which statistical method(s) they intend to use when conducting compliance or assessment monitoring.
72. If a statistical method can meet the requirements Section 841.225(b), without collecting eight samples, why should the method be rejected?

CLOSURE AND POST-CLOSURE ANNUAL REPORTING:

73. An owner or operator can certify that at installation and up until the time it is covered by the protective layer that the low permeability layer has not been compromised. Please describe how an owner or operator would certify that there are no holes or tears in the low permeability layer once it is buried under three feet of soil with vegetation on top.

ANTIDegradation ANALYSIS:

74. Under the Environmental Groups' proposal, must an antidegradation analysis be completed for every corrective action plan and closure plan with planned discharges to waters of the United States, even if not otherwise required by Subtitle C?

FINAL COVER SYSTEM:

75. Would it be acceptable to ELPC to move the requirement for the demonstration of the cover system permeability by a standard field method or laboratory method proposed in Section 841.420(b)(1) to proposed Section 841.155 as part of the Construction Quality Assurance Program?

PUBLIC NOTICE:

76. Please explain why the requirements in proposed Section 841.165(c) are necessary in light of the procedures for informational and quasi-legislative public hearings found in 35 Ill. Adm. Code 164.
- 76.1 Why do the Environmental Groups propose that the Agency is not required to comply with the procedures in 35 Ill. Adm. Code 164?
77. Please explain what the phrase “a significant degree of public interest” means.
- 77.1 Should the Agency consider multiple form letters as a significant degree of public interest?
- 77.2 Can the Agency determine there is not a significant degree of public interest when the comments received from the public lack detail, citations to specific plans, or technical or economic analysis of the proposed plans?
78. In proposed Section 841.165(c), the Environmental Groups propose that the Agency hold a public meeting when there is a significant degree of public interest in a proposed "plan". Does this requirement also apply to alternative cause demonstrations?
79. Must alternative cause investigations under the Environmental Groups' proposed section 841.235(c) be posted on the Agency's webpage for public notice?
80. In the Environmental Groups' opinion, approximately how many alternative cause demonstrations will the Agency receive in one year?
81. In proposed section 841.165(e) of this Section, the Environmental Groups propose that the Agency post its decision made under this Section on its website “on the postmarked date that the notice is mailed.” To what “notice” is this a reference?

- 82.1 Does ELPC intend for the Agency to provide notice of its decision to every individual that participated in the public notice process?

INSPECTION:

82. In Section 841.170(a), the Environmental Groups propose requiring CCW surface impoundment owners or operators conduct inspections of units subject to this Part. Can owners or operators hire or contract the services of qualified individuals to conduct the required inspections, or must the owner or operator conduct the inspections?
83. In Section 841.170(b), the Environmental Groups propose requiring CCW surface impoundment owners or operators “promptly perform repairs necessary to correct any problem observed during an inspection.” What is meant by promptly?
84. In Illinois, which state agency regulates the construction and maintenance of dams?
85. In Traci Barkley’s testimony, p. 5, Ms. Barkely states “In U.S. EPA’s structural integrity assessments of the surface impoundments containing coal combustion residuals and with maximum embankment heights of six (6) feet at electric utilities in Illinois, 16 of the 38 impoundments received a rating of ‘poor.’ Another 16 impoundments received a rating of ‘fair’, only four (4) were rated as ‘satisfactory’ and one (1) evaluation was still ‘in progress.’” Are the Environmental Groups aware that the dam safety ratings quoted in Ms. Barkely’s testimony from the U.S. EPA’s inspection report have been further evaluated and reviewed by engineers in the Office of Water Resources at the Illinois Department of Natural Resources.

DESIGN CRITERIA:

86. Does proposed Section 841.450(a) apply to existing unlined units?
- 86.1 If so, describe the process by which a unit that currently contains CCW would be fit with a composite liner?
- 86.2 If CCW would have to be removed in order to fit an existing unit with a liner, what would be done with the CCW during the construction of the liner?
- 86.3 How many existing units would be required to construct a new liner?
- 86.4 How much CCW would have to be removed from existing units in order to construct new liners within five years of the effective date of this Part?
- 86.5 Where would the CCW removed from those units be stored?
- 86.6 What would the potential environmental impacts of removing CCW from an existing unit during the construction of a liner be?

- 86.7 Has ELPC conducted an analysis of the economic impacts of requiring that existing CCW surface impoundments that currently house CCW be lined? If so, could ELPC provide that analysis?
87. Please explain what the following language in the Environmental Groups' proposed Section 841.450(a)(2): "the FML component must be installed in direct and uniform contact with the compacted soil component."
88. Can the Environmental Groups explain in detail the leachate collection system design?
- 88.1 Can you provide details on the design of the drainage layer component of the leachate collection system?
- 88.2 Should leachate collection systems be designed and function differently depending on the expected amounts of leachate to be collected?
- 88.3 What is the anticipated amounts of CCW leachate collected from a CCW surface impoundments, and how do these amounts compare to a municipal solid waste landfill?
- 88.4 Does the leachate collection system proposed by the Environmental Groups use the U.S. EPA design criteria described on 75 Fed. Reg. 35174 which indicates the leachate collection system must be designed to maintain less than 30 cm depth of leachate over the liner?
- 88.5 What is the depth of leachate typically found in a CCW surface impoundment?
- 88.6 How would the depth of leachate in a CCW surface impoundment be maintained at less than 1 foot?
89. Do you recommend the installation of the leachate collection system in a surface impoundment above or below the composite liner?
- 89.1 What purpose does the leachate collection system serve above the composite liner?
- 89.2 What purpose does the leachate collection system serve below the composite liner?
90. On Pg. 11 of the Environmental Groups' proposal, the following statement is made: "The Agency's proposed rule is in conflict with 415 ILCS 55/2(b) by allowing continued degradation of groundwater by permitting existing unlined and inadequately lined impoundments to remain open without lining or relining, even if they are causing groundwater contamination."

- 90.1 Under the Agency's proposal, can groundwater exceedences remain without corrective action or closure? If no, please explain how the Agency's proposed rule is in conflict with 415 ILCS 55/2(b).
- 90.2 What do you mean by inadequately lined impoundments?
- 90.3 Should an existing CCW surface impoundment that is lined with two feet of compacted earthen material with a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second or a synthetic liner that provides equivalent protection and that has no groundwater quality exceedence be required to be relined pursuant to the Environmental Groups' proposed Section 841.450?
91. Does the Environmental Groups' proposal contain siting requirements for new facilities? Why or why not?
92. Did the Environmental Groups consult the design criteria for municipal solid waste landfills in Parts 811-815 when drafting their proposed design criteria?
93. Proposed Section 841.450(a)(3) requires any impoundment in operation on or before the effective date to be lined with a composite liner and leachate collection system. Proposed Section 841.450(a)(1), however, requires the installation of a composite liner and leachate collection system, or a liner system with equivalent or superior performance. Are existing units with liner systems of equivalent or superior performance required to install the composite liner and leachate collection system under proposed Section 841.450(a)(3)?
- 93.1 Would the Environmental Groups be willing to provide language clarifying its proposed intent?

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
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CERTIFICATE OF SERVICE

Joanne M. Olson, Assistant Counsel for the Illinois EPA, herein certifies that she has served a copy of the foregoing NOTICE OF FILING and ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S PREFILED QUESTIONS FOR THE ENVIRONMENTAL GROUPS upon persons listed on the Service List by mailing, unless otherwise noted on the Service List, a true copy thereof in an envelope duly addressed bearing proper first class postage and deposited in the United States mail at Springfield, Illinois on June 11, 2014.

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