

**Response to Questions
R12-9(B) Rulemaking**

Response to IPCB questions:

1. If the Board proceeds with groundwater monitoring, should background levels be established for all wells or just the wells upgradient? See Tr. At 56.

Response: All monitoring wells should have four quarters of background levels established for all required groundwater monitoring parameters. Downgradient versus upgradient designations for wells are not always immediately determined and groundwater flow directions may change seasonally or in response to groundwater withdrawals. In addition, obtaining four quarters of background levels for all wells will allow the use of intra-well statistical analysis if necessary.

2. Is the cost for modeling provided by LRRRA for the Bluff Springs facility of \$364,000 typical for a CCDD site? If not, is a typical cost higher or lower? See Tr. at 66. NO RESPONSE FROM WILL COUNTY

3. What type of modeling is typical for a groundwater assessment at a CCDD facility? See Tr. At 66.

Response: As there has been no groundwater modeling performed at any CCDD site, there is no "typical" groundwater model for groundwater assessment at a CCDD facility and it is our understanding that it is not required in the IEPA's proposed rules.

4. The proposed regulations refer to requirements for determining the quality of groundwater downgradient in horizontal and vertical directions. If the horizontal component is determined using a monitoring well that is screened to capture groundwater from a wide range of depths, is it necessary to determine the precise vertical component for the purposes of monitoring and demonstrating compliance? See Tr. at 75. NO RESPONSE FROM WILL COUNTY

5. Would the vertical component only be necessary if remediation were contemplated? See Tr. at 75. NO RESPONSE FROM WILL COUNTY

6. Under what conditions would a site only need four groundwater monitoring wells? See Tr. at 159.

Response: Four groundwater monitoring wells would be appropriate for a CCDD site with a clearly apparent groundwater flow direction where one upgradient and three downgradient wells would suffice. Such a site would also consist of one primary water-bearing unit to be monitored for contaminants, and would have a more compact disposal footprint as opposed to a long linear footprint where additional upgradient and downgradient wells might be necessary to provide appropriate coverage.

7. Provide an explanation of IEPA's ranges of cost estimates for establishing a groundwater monitoring network. See Tr. at 77.

Response: Although this question pertains to IEPA's cost estimates for establishing a groundwater monitoring network, Will County has provided cost estimates previously regarding this as well. A recent Chicago Sun-Times article indicated a CCDD site

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(Chicago Street CCDD, Site C* shown in the table below) in Will County sold for \$17.7 million dollars in 2008. If a CCDD site can potentially be worth over \$17 million dollars, it indicates that a significant amount of profit is anticipated by the operator. Therefore, it is difficult to understand why a CCDD owner or operator cannot afford to install a groundwater monitoring system and sample groundwater, if the cost of performing such work is a small fraction of the cost of owning and operating a site. NOTE: Below you will find Will County's groundwater consultant's cost findings to implement a groundwater monitoring system as applied to four Will County CCDD sites.

Site	Capacity cubic yard (cy)	Operating Years Remaining	Cost (Well Installation & Monitoring Annually/cy)
A	14,098,300 cy	25	\$.06/cy (\$156,300 wells + \$686,004 monitoring for 25yrs)
B	8,731,000 cy	20	\$.08/cy (\$156,300 wells + \$505,551 monitoring for 20 yrs)
C*	23,000,000 cy	33	\$.05/cy (\$156,300 wells + \$1,036,389 monitoring for 33 yrs)
D	1,363,786 cy	3	\$.16/cy (\$156,300 wells + \$58,048 monitoring for 3 yrs)

8. Although Section 742.Appendix B, Table C (Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)) does not address concentrations for pH greater than 9.0, the only two constituents with Maximum Allowable Concentration (MAC) values that decrease as pH increases are Chromium (+6) and Selenium.

(a) Would the Agency be able to propose MAC values for Chromium (+6) and Selenium for pH greater than 9.0 or even just for pH of 12.49? If so, please comment on including just these values for Chromium (+6) and Selenium solely in Part 1100, so as to not to require opening up Part 742 to make a revision? See Tr. at 6 1-62.

(b) In light of concerns regarding loads being rejected based on pH values greater than 9.0 and because the Agency did not include an upper pH limit in its proposal, please comment on the pH standard adopted by the Board and whether the pH range should be limited to 6.25 and 12.5 as suggested in James Huff's testimony, as opposed to 6.25 to 9.0 as adopted. See Tr. at 78. NO RESPONSE FROM WILL COUNTY.

9. If the pH range of uncontaminated soil was limited to between 6.25 and 12.5, should the Maximum Allowable Concentrations, or MACs, in uncontaminated soil still be determined based on the lowest pH dependent value in 742, Appendix B, Table C, between the column ranges 6.25 and 9.0? See Tr. at 79. NO RESPONSE FROM WILL COUNTY.

10. Are the number and locations of IDOT and other transportation-related excavations used

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for CCDD/USF that are exempt pursuant to Section II00.101(b)(3) known across the State?
See Tr. at 139-46. NO RESPONSE FROM WILL COUNTY.

11. Is information available regarding the geologic conditions at the transportation-related excavations used for CCDD/USF that are exempt from these rules, and how these conditions differ from quarries, mines, or other excavations covered by these rules? See Tr. at 140. NO RESPONSE FROM WILL COUNTY.

12. Are the transportation-related excavations used for CCDD/USF typically smaller than CCDD and uncontaminated soil fill operations? If so, is there less concern regarding the potential for groundwater contamination because of the reduced volume of CCDD/USF materials being deposited? See Tr. at 140. NO RESPONSE FROM WILL COUNTY.

13. Do any other states have regulations for a subset of construction and demolition debris, such as clean or uncontaminated debris? If yes, is groundwater monitoring required? See Tr. at 155. NO RESPONSE FROM WILL COUNTY.

14. Of the nine facilities shown on the map of Will County submitted by Mr. Cravens in his testimony, how many of these are now accepting CCDD or USF, are actively mined, and continuing to dewater with an established cone of depression?

Response: Nine CCDD sites accept material in Will County. One site accepts USF. It is our understanding that three CCDD sites are being mined and dewatered.

For those facilities that are dewatering with an established cone of depression, how long will dewatering continue? See Exh. 55.

Response: That is unknown to Will County. That would be a question for the CCDD (and/or mining) operator to answer.

15. How many CCDD/USF operations across the state are still actively mined, and continuing to dewater with an established cone of depression? NO RESPONSE FROM WILL COUNTY.

16. Please provide the additional information concerning the groundwater monitoring data included in the Agency's prefiled testimony: the type of facilities sampled, i.e. CCDD or USF fill operations; facility location; sampling protocols, and whether the samples taken were representative of the groundwater underlying the CCDD/USF facilities; and information on any comparisons made between the metal concentrations in the groundwater samples with available statewide area background for metals in soil or groundwater. See Tr. at 110-112. Specifically for the Fall 2012 data indicating an exceedance of benzo(a)pyrene, please identify the location and depth of the fill area and monitoring well(s) where the benzo(a)pyrene exceedance was found. See Tr. at 84-85, 110, Exh. 59 at 8-11, Exh. 63 at 9-10, Exh. 64. NO RESPONSE FROM WILL COUNTY

17. Please comment on whether the Board should consider raising the PID response value to 5.0 ppm as suggested on page 4 of Mr. Huff's testimony. See Tr. at 160.

Response: Will County would not be in agreement with an increase in the PID response value to 5.0 ppm. Any increase in contaminant acceptance criteria should be accompanied by the addition of an appropriate environmental protection system, such as a liner system.

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18. Proposed Section 1100.735 requires groundwater monitoring for all Class I parameters in 35 Ill. Adm. Code 620.4 10. The Agency stated that the groundwater standards in Part 620 are based on total metals, although some programs require both totals and dissolved, but always totals. Exh.63 at 11.

Mr. Huff raised the issue that monitoring wells in Illinois are often screened in unconsolidated units of silts and/or clays, and a total metals analysis reflects both what is in the groundwater as well as the particulates or sediment in a sample. Exh. 58 at 3. The Agency acknowledged that turbidity in samples has an impact on metals, but developing a well correctly should keep turbidity from becoming an issue. The Agency recommended low flow groundwater monitoring to minimize turbidity. See Tr. at 48-51.

USEPA Region 9's "Field Sampling Guidance Document #1220, Groundwater Well Sampling" stated, "With respect to the ground water chemistry, an adequate purge is achieved when the pH, specific conductance, and temperature of the ground water have stabilized and the turbidity has either stabilized or is below 10 Nephelometric Turbidity Units (NTU). Ten NTU is the (maximum) goal for most ground water sampling objectives." "Field Sampling Guidance Document #1220, Groundwater Well Sampling", REV. 1, 9/2004, USEPA Region 9 Laboratory, Richmond, California at 13. http://www.epa.gov/region6/qa/qadevtools/mod5_sops/groundwater/sampling/r9gw_gui.pdf

To avoid the submission of groundwater monitoring samples from monitoring wells where an adequate purge has not been achieved and the groundwater has not been stabilized, would including a provision that would limit samples submitted for metals analysis (total and/or dissolved) to 10 NTU or less be appropriate? NO RESPONSE FROM WILL COUNTY

19. Please provide additional information regarding the results from a recent soil sampling exercise submitted by IEPA in response to Board's prefiled Question 3(a) in Hearing Officer order dated April 18, 2013. See Tr. at 149-151.

- (a) Please provide additional information on the type of facility (CCDD or uncontaminated soil fill facility), and their location.
- (b) Please clarify how many samples were taken at each facility and whether the Agency believes the samples were representative of the soil being accepted at the sampled facilities.
- (c) Please comment on whether the Agency has made any comparison of the sampled metals concentrations with background soils in the state.
- (d) Do any of the ten facilities monitor groundwater?
- (e) If the sampled facilities were in compliance with the existing CCDD regulations, please comment on the reasons for exceedances of the MACs.

NO RESPONSE FROM WILL COUNTY