

To: Mike Smith, P.E. IDNR
From: Cindy Turkle
Date: February 22, 2022
Re: Groundwater Monitoring Comments

Mike,

Thanks again for all the effort you are putting into this project.

Much of what I have at this time I already voiced at the committee meeting. Some of my comments will overlap into some of the other committee considerations (i.e., final cover, gas, etc.) so I apologize for repeating them. For documentation purposes, I have the following thoughts:

- Again....Be sure the rules/policies are flexible enough to recognize the differences between old, closed landfills (pre-2008 without FML) and closure of new cells with FML and gas systems. Expecting the old landfills to meet some of the requirements related to installing additional wells, leachate collection, and gas control is unrealistic, expensive, and is opposed to the original post-closure requirements when the sites closed.
- Do not let the Environmental Covenant become a “permit” by placing too many restrictions in it.
- If a closed landfill without a leachate collection system has intermittent leachate seeps that never leave the property, they should not be required to install any corrective mechanism, but instead let it attenuate and dry up naturally.
- Even if some of the ground water data indicates minor contamination (less than the EPA MCL) and the testing demonstrates it is not leaving the property, the site should not be required to install additional wells or conduct additional testing. Can it also be allowed to be attenuated or diluted by ground water?
- Many of the old sites have leachate seeps influenced by ground water. Corrective actions are site specific and may not be necessary or be required if the leachate is not leaving the site or impacting “usable” groundwater.
- If the leachate can be dispersed or diluted naturally, it should be permitted. Many of the old sites had a Risk Assessment conducted to show that any leachate from the waste would not result in groundwater contamination. IDNR should allow that study or similar statistical reports to support closure even if leachate seeps are observed and/or if some monitoring wells show some minor contamination.
- The waste boundary on many of the old landfills was different than what was shown on the plan sheets. Because IDNR required monitoring wells to be installed within fifty feet of the waste boundary, many were placed closer to the actual waste (less than 50 ft. away) and are reporting some contamination either due to the proximity of the waste or due to the landfill gas. Review of the boring logs, installation of step-out wells, or other actions should be allowed to show this situation. The data from those wells being impacted directly by the waste due to this problem should be discounted and thrown out. Can we use the EPA point of compliance distance instead?

- The level of contamination where additional action is required should be based upon exceedances of the EPA MCL, not the Iowa Ground Water Standard (i.e., cobalt).
- As stated previously, the handling of any leachate should be site-specific and dependent upon the quantity, the quality (diluted by ground water?), and the collection system in place. Does the site have any type of collection system? Is the system in an FML lined cell that is reaching a static condition with an FML cap? It will be different than a retrofitted toe drain. Is the leachate affected by groundwater infiltration? Can the landfill site absorb the leachate and reach a stable condition like we are seeing at Butler County? Several years of monitoring may be needed to determine when a system can be turned off.

For right now those are my thoughts. Thanks