From: Jeff Tinney
To: Busko, William A CIV NAVFAC MW EV
Cc: Tim Boos
Subject: RE: Draft First Quarter Landfill Event Summary Report
Date: Thursday, February 08, 2007 12:47:47 PM

Tim will be back in the office on Monday and I will make this his top priority. My gut feeling is that the water levels were collected at the time the well was sampled and sense the sampling process was over a long period (approximately 1 month), I would anticipate that is why the water appears to flow west. He did go back and collect water levels from each well on the same day before he left so we should get a more accurate water flow direction. In any case, we will address these comments and if required, collect more data to document the flow of water in the south to southeast direction.

-----Original Message-----
From: Busko, William A CIV NAVFAC MW EV [mailto:william.busko@navy.mil]
Sent: Thursday, February 08, 2007 11:34 AM
To: Jeff Tinney; Tim Boos
Subject: FW: Draft First Quarter Landfill Event Summary Report

Jeff, Tim,

From the text below, Brian is unsatisfied with the quarterly sampling report for Supplyside and Forrestal Landfills. Please address Brian's concerns AS SOON AS POSSIBLE!

-----Original Message-----
From: Brian Conrath [mailto:Brian.Conrath@illinois.gov]
Sent: Thursday, February 08, 2007 9:57
To: Busko, William A CIV NAVFAC MW EV
Subject: Draft First Quarter Landfill Event Summary Report

Bill,

I received the above-listed report and have taken a quick look through it. I did not perform a thorough review, from which to generate a comment letter yet. However, I have found some issues that I think need to be addressed sooner rather than later. I have listed them below.

1) The calculations for groundwater flow direction include all of the wells at each landfill that produced water. In looking at the water level data, it appears that some of those wells may be screened in a different water bearing unit. At Supplyside, well SL-05 had a water level that was roughly 13 feet higher than the rest of the wells. This is most likely perched water, and not the same unit as the rest of the wells. It should be removed from the calculation. For Forrestal, wells FL-02 and FL-05 had water levels that were roughly 30 feet lower than the rest of the wells. They should be removed from the calculation as well.

2) Once those wells are removed from the flow direction calculations, the result is that for both landfills the flow direction is almost due west. This brings several questions to light. First, were the water levels measurements for all of the wells taken on the same day and at roughly the same time? If not, the data is inaccurate. Those measurements must be made in close proximity of each other, timewise.

Second, wasn't the groundwater flow direction calculated prior to installing the monitoring wells? Did those calculations show flow being to the west? The siting of the monitoring wells was based upon a groundwater flow somewhere to the south-east, more or less. If the flow direction is actually to the west, the monitoring well network is set up all wrong. The wells assumed to be in the down-gradient direction are actually in the up-gradient direction and vice-versa. That would mean that there are not enough wells in the down-gradient direction to adequately monitor the landfills. Did the 2nd quarter data agree with the 1st quarter data in this respect? This needs to be verified before the next sampling timepoint.

3) If the groundwater flow was calculated as being in the wrong direction, why was it not discussed in more detail in the report? It mentions the difference, but merely dismisses it by stating that it may be supported by the lithology. There is no mention that the difference means the entire program is built upon a faulty assumption that groundwater flow is to the south south-east. Obviously, such a major finding should be discussed in detail.

These are very important issues and questions. Hopefully, there is a reasonable explanation for them and a revision to the report can be made. If the data are valid as is, it appears that there will need to be significant revisions made to the groundwater monitoring plan.

I have not spent much time looking at the analytical results of the groundwater samples yet, but plan to do so in the coming days.

If you have any questions regarding anything in this correspondence, please give me a call at (217) 557-8155. I should be in the office pretty much the next week or so, except Monday, which is a State holiday.

Sincerely,

Brian A. Conrath
Illinois EPA