

1. Was the water used in drilling the bore hole from a municipal water supply treated with chlorine or other chemicals that could kill *E.coli* and/or other fecal coliforms, whether in soil or water? Harbor's report states "No *E.coli* was detected in any of the soil samples".
2. According to the USDA's Agricultural Waste Management Field Handbook (that ADEQ has included as part of Regulation 5), it states that there should be one (1) well per 10,000 square feet of pond area. C & H waste storage ponds cover 70,000 square feet. So, to meet USDA's criteria, there should have been seven (7) wells drilled in support of the study. Why did ADEQ not uphold this requirement, regardless of Mr. Henson's decision to allow only one well? The inadequacy and futility of the study equals "looking for a needle in a haystack".
3. Under "subsurface conditions" (from Harbor's power point report), it states "some water loss during drilling suggested fracture zones from 25 – 38 feet bgs and again from 98.5 – 120.5 feet bgs". Should those zones not be studied further for potential groundwater pollution?
4. Under "soil leachate" results, Harbor reports – Chloride concentrations ranged from 0.881 to 21.60 mg/L - (21.60 mg/L collected at 18.5 feet bgs); Harbor further reports that the highest concentration of chloride measured in the ambient study was 20.25 mg/L which is "within the same order of magnitude". What is the range of chloride measured in the USGS study and interpretation of "order of magnitude" is needed? Given that chloride is an important marker for hog waste, this seems worthy of more comment.
5. If I correctly understand the "water sampling and analysis", it appears that sample B-1GW-5 may be the only reliable or competent water sample tested for AOI. B-1GW-1, B-1GW-2 and B-1GW-3 are drilling water and B-1GW-4 is a mix of drilling water and groundwater. It seems to me that testing drilling water separately and groundwater separately would answer more questions, regardless of the level of AOI in the pond samples.
6. In the "water sampling and analysis", Harbor states that "Chloride concentrations ranged from 7.24 to 29.0 mg/L. Samples B-1GW-3 and BD-3 exceeded the highest ambient background concentration of 20.25 mg/L. Samples B-1GW-1, 1GW-3 and BD-3 exceeded the concentration measured in potable water sample PW-2. Is this not a significant finding requiring more attention?
7. I am confident that the water test results are correct however the sample collections appears problematic. Please explain why this information seems insufficient.
8. "Borehole abandonment" – Harbor states "Borehole volume was estimated at 23.6 cubic feet (176 gallons). Total estimated grout placed in the borehole was approximately 280 gallons." What accounts for double the estimated gallons of cement? Did the cement run into fractures bgs as well as the borehole?

Alice B. Andrews
alice209ok@yahoo.com or 501-219-4295