

# **Appendix B**

## Correspondence

See comments below in **bold**.

**Erik Lietz, PE**, President and Principal Engineer

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On 7/29/21 14:31, Hansen, Ian G - DNR wrote:

Erik,

The department has the following review comments on the under barn waste storage facility projects at Cumberland LLC. Please give me a call if you would like to discuss.

1. I reviewed the structural calculations but could not find a calculation for total and differential settlement. Additionally, I couldn't find any reference to a presumptive bearing capacity. Is this information part of the barn structural plans by others?  
**See revised calculations including this.**
2. Can you verify that the frost wall call out on the right side of the GDU Barn on Sheet 21 is supposed to be referring to Detail 2/25 instead of detail 2/24?  
**This has been corrected.**
3. The call out for Wall Design "I" on Sheet 13 refers to detail 2/28 instead of 1/28.  
**This has been corrected.**
4. How will manure be removed out of the 2' deep pit area in the farrowing barn?  
**This area will have pull-plugs that will allow for transfer of waste into the 10-foot deep portions of the WSF.**
5. How will industrial wastes be added to pit? Is there a particular WSF designated for industrial wastes?  
**Industrial wastes will be added to the WSFs at the exterior pump-out ports. Each WSF will have the ability to hold industrial wastes.**
6. Are you intended to use Table 2A Column A requirements, or Table 2A Column B requirements for subsoils? The soils appear to meet both requirements, there's just minor inconsistency in the depth (1.5 ft vs 2 ft) depending on if PI will be included as an aspect of the design.  
**We are using Table 2A, column A for subsoil requirements.**
7. The submittal only provided manure generation calculations (Pg 25 App C) for the farrowing barn and the calculations appear to stop midway through. I was able to find calculations dated 07-17-2019 from the permit application that are likely similar, however can you send the manure generation calculations for each barn?  
**This has been corrected and included in the calculations.**
8. Will permanent markers be installed at the freeboard level in addition to the MOL and 180 day markers? What is the elevation for the 180 day level in each WSF?  
**Yes, this has been added to the plans. The freeboard level is equal to the MOL.**
9. How did you come up with the 10% factor for the column reduction in storage?  
**The actual volume of columns was calculated into the storage volumes.**
10. Looks like Tony reached out about wetland permitting, if you get an update on the status of the wetland process, please let me know.  
**This has been completed and included in this submittal.**
11. Can you add some O&M measures to observe WSF drain tile for odor, turbidity, etc.  
**This has been added to the O&M Plan.**

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**Ian Hansen, P.E.**

CAFO Engineer – Bureau of Watershed Management

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