

November 16, 2017

Joe Rheaume
Town of Charlotte
159 Ferry Road
Charlotte, VT 05445

Subject: WW Hinsdale Charlotte Farms
TCE Job: 17-124

Dear Joe,

Thank you for the forwarded comments from Brian Tremback received on November 15, 2017 for Hinsdale Charlotte Farms. We've included those comments here and our response is below in bold.

From these comments, we've revised the Pump Station Calculation sheet to include more precision and have made modification to the ON and ALARM float levels to provide 100% compliance with the Rules.

1. The site plan should contain a note regarding abandonment in place of the existing failed leach field. Also, because the force main will be installed through the old absorption bed, reference should be made to Section 1-924 of the Rules in case material from the excavated trench needs to be disposed of.

A note has been added to the plans instructing abandonment in-place. The note includes reference to Section 1-924 of the Rules in the event that the existing septic system's materials need to be removed from the site to properly install and embed the force main. If the existing materials need to be removed from the site, they must be disposed of in a State approved landfill.

2. The design of the pump station should be re-evaluated to address these issues:
a. The dose volume needs to be greater than 5x the volume of the pressure network (laterals + manifold); the 3" drop between pump on and pump off would only be about ½ of that amount.

The pressure network (laterals + manifold) = 29 gallons

Minimum dose (5x network) = 29 gallons x 5 = 145 gallons

The current dose volume is 6"* = 133 gallons, 12 gallons shy of meeting the requirement. To resolve this, the dose volume has been adjusted to 6.5" providing 146 gallons per dose > 145 gallons min. required

Refer to revised Pump Station Calculations Sheet included as an attachment.

*dose volume was 6" not 3", 3" was the difference between the ON and ALARM point

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b. Is a 1000-gal tank large enough to fit the required dose volume, a storage volume of 700 gallons above the high water alarm, and the static volume below low water level?

Yes, a standard 1,000 gallon tank is large enough for this project. To show this clearly, we've provide Camp Precast's cutsheet for their standard 1,000 gallon septic tank with information from the Pump Station Calculations Sheet included on the cutsheet. This shows the tank can provide the minimum storage above the alarm and minimum dose volume. Additionally, this tank includes an 8" pedestal keeping the suction point out of any accumulated solids.

c. A clear specification on whether the pump station will have a weep hole in the force main to allow draining between doses; the length of the pipe will be about 350 ft and will have a volume of over 50 gallons.

The pump station will not have a weep hole for drainback. The detail has been revised to remove this option.

d. The specified invert in of the pump station is higher than the invert out of the septic tank

I added where I should have subtracted – good catch! This has been revised on the Site Plan.

We expect the responses above will clarify your initial concerns. Should you have any questions, please do not hesitate to contact me directly.

Thank you,



Amanda Raab

Trudell Consulting Engineers