

**From:** Maureen O'Leary  
**Date:** Saturday, November 12, 2016 at 9:04 AM  
**To:** Maureen O'Leary  
**Subject:** Rennie Farm Project Update

Dear neighbors,

Work continued this week at and around the Rennie Farm site. Activity focused on the construction of the groundwater treatment system and groundwater monitoring projects, including:

- Installation of groundwater extraction wells around the excavation area;
- Improvements to the gravel road at the site;
- Tree cutting along the gravel road to facilitate the installation of electrical service to the treatment building and to provide access to a groundwater extraction well to be installed near monitoring well GZ-9L;
- Start of the construction of the gravel pad to support the above-ground treatment system and extraction system components;
- Arrival of the container that will house the above-ground groundwater extraction system components;
- Installation and sampling of groundwater monitoring wells; and
- Continued private water supply well sampling (more than 100 private wells have been sampled to date).

The results of the ongoing groundwater and surface water sampling are consistent with the previously reported results; however, we have recently detected 1,4-dioxane in a sample collected from a swimming pool that was filled with water collected from Hewes Brook to the north of the Rennie Farm site. The water was collected to fill the pool on October 5, 2016, following the replacement of the pool liner. According to the distributor of the pool water, the identified swimming pool is the only pool to which water was supplied from the location on Hewes Brook this year.

The water used to fill the pool was collected at a location downstream of surface water sampling locations Stream 5 and Stream 6. The concentration of 1,4-dioxane detected in the first sample of water from the swimming pool is 1.7 micrograms per liter (ug/L), which is below the 3.0 micrograms per liter groundwater standard for 1,4-dioxane in New Hampshire. Analysis of surface water samples collected from Stream 5 and Stream 6 on and prior to September 28, 2016, did not detect 1,4-dioxane. We collected samples of surface water from Hewes Brook at the location where the water was drawn for the swimming pool (now called Stream 7), and no 1,4-dioxane or other volatile organic compounds (VOCs) were found.

This finding prompted an investigation into other possible sources of 1,4-dioxane in the pool water, including the pool liner/its manufacturing process. More samples of the pool water were analyzed for 1,4-dioxane and other volatile organic compounds. 1,4-dioxane was detected at a concentration of 1.6 ug/L in the confirmatory sample collected from the pool, along with three other VOCs: 2-butanone (220 ug/L), 4-methyl-2-pentanone (390 ug/L), and chloroform (25 ug/L).

The additional VOCs detected in the sample collected from the pool are used as solvents, and have not been detected at the Rennie Farm site. 1,4-dioxane, 2-butanone, and 4-methyl-2-pentanone are all used in the manufacture of flexible PVC films and sheets used for pool liners and in the adhesives used to weld liner seams prior to installation. Based on the results of the sampling at surface water locations Stream 3 through Stream 7, the replacement of the liner in the pool, and the use of 1,4-dioxane in the manufacture of swimming pool liners, the likely source of the contaminants detected in the swimming pool water is the new pool liner. We will continue to monitor surface water location Stream 7 as a precaution.

We continue to offer drop-in hours for Rennie Farm neighbors and the public. Our next session will be held on Thursday November 17, from 3 to 5 pm in the Environmental Health and Safety conference room located on the Dartmouth College campus at 37 Dewey Field Road in Room 115. Dr. McLellan, Jim Wieck, and I will be there to address questions and concerns about the Rennie Farm project. Please feel free to join us.

Sincerely,

Maureen

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