



The State of New Hampshire  
**DEPARTMENT OF ENVIRONMENTAL SERVICES**



**Thomas S. Burack, Commissioner**

E-MAIL ONLY

September 9, 2015

Michael D. Cimis, Assistant Director of Environmental Health & Safety  
Dartmouth College  
37 Dewey Field Road, Suite 6216  
Hanover, NH 03755

**Subject:** **Hanover** – Dartmouth College Rennie Farm Site, Hanover Center Road  
DES Site #201111109, Project #27737

**Work Plan – Off-Site Water Supply Well Sampling**, prepared by GZA  
GeoEnvironmental (GZA), dated September 1, 2015

Dear Mr. Cimis:

The Department of Environmental Services (Department) has completed its review of the above-referenced Work Plan for the Rennie Farm site in Hanover, as recently submitted pursuant to our August 20, 2015 meeting, at which we discussed the preliminary findings of the additional hydrogeologic investigations recently completed at the site by GZA. As discussed at our meeting and further documented in the subject submittal, the Department notes that recent groundwater sampling of additional monitoring wells installed at locations further downgradient from the site has detected the regulated contaminant 1,4-dioxane at concentrations that exceed its Ambient Groundwater Quality Standard (AGQS) of 3 micrograms per liter (ug/l). Specifically, 1,4-dioxane concentrations of up to 520 ug/l (monitoring well GZ-9L) were reported for the July 22, 2015 sampling round, as recently completed by GZA.

Consistent with the discussions at our August 20, 2015 meeting, the GZA Work Plan presents a proposed scope of work for collection and analysis of groundwater samples from up to nine off-site residential water supply wells. Two rounds of groundwater sampling are proposed for each of the nine private wells (assuming access for sampling is granted by the homeowners), with analysis of the groundwater samples for 1,4-dioxane via USEPA Method 8260 using Selected Ion Monitoring (SIM) (i.e., "low-level" analysis). Based on our review, the Department finds that the scope of the proposed testing is consistent with our requirements as discussed at the above-referenced meeting. The Department thus approves the GZA Work Plan, subject to the following comments and clarifications.

- Collection of the private well groundwater samples using an existing tap, following an approximate 20-minute purge period is appropriate; however, for locations that may be serviced by a water treatment system (e.g., water softener, etc.), please collect the samples from a tap located upstream of the treatment system, as feasible. Depending on specific plumbing system configuration, note that limited additional purging prior to sample collection could potentially be required if separate taps are used for purging and sample collection.
- Please ensure that the proposed low-level 1,4-dioxane analysis provides results to an analytical reporting limit of no greater than 0.25 ug/l.

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DES Web Site: [www.des.nh.gov](http://www.des.nh.gov)

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