

State of Vermont
Department of Environmental Conservation
Waste Management Division
103 South Main Street/West Building
Waterbury, VT 05671-0404
(802) 241-1081
FAX (802) 241-3296
alex.geller@state.vt.us

January 22, 2013

LEWIS KELLER
175 CORNER ROAD
WALDEN, VT 05843

RE: Supplementary Site Investigation
Site: Keller Residence, 175 Corner Road, Walden, VT (SMS Site #2011-4229)

Mr. Keller,

The Sites Management Section (SMS) has received the report entitled “*Supplementary Site Investigation*” from Ross Environmental Associates (REA) and dated January 4, 2013. This investigation and report were requested in order to define the full degree and extend of contamination related to the Above Ground Storage Tank (AST) leak at your property. Based on this report and the site file, the SMS recognizes the following:

- On November 12, 2012, REA visited the site and advanced a total of 10 soil borings, with 5 of the borings completed as monitoring wells. Soils encountered during the advancement of soil borings consisted silt and sand, with a consistent layer of brown/grey clay encountered a depth of around 4-5 feet below grade. REA was careful not to breach this layer of clay, which is effectively separating the surficial, unconfined aquifer, from the lower, confined aquifer. Groundwater throughout the 10 soil borings was generally encountered between 3 and 3.5 feet below grade. Soils extracted from the borings were screened via photo-ionization detector (PID) for the presence of petroleum vapors. Where PID readings were recorded in excess of 10 parts per million (ppm), soil samples were collected and submitted for laboratory analysis. Only one soil samples was collected in this fashion, which was located nearest the former AST location and release. PID readings from these soils ranged between 20 and 46 ppm.
- Following the completion of the investigation, REA returned to the site in order to collect groundwater samples from the newly installed monitoring wells. Groundwater flow was determined to be southwest at a 3 percent gradient. With respect to the source area of contamination, the water supply spring appears to be cross gradient the groundwater flow direction. Samples from the monitoring wells could not be collected via low flow procedures due to low groundwater recharge in the wells and thus samples were collected via disposable bailer. Groundwater samples from all monitoring wells on site were analyzed via EPA methods 8021B for volatile organic compounds and 8015DRO for total petroleum hydrocarbons. None of the samples collected showed detections of any targeted analytes. One soil sample was collected from a boring near the source area, however analysis via EPA Method 8021B did not show any signs of contamination.
- The water supply spring continues to be tested for contamination on a monthly basis. Thus far there have been no detections of any contamination related to the AST kerosene release.



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Based on the report information, the SMS concurs with the recommendations of REA for additional investigation at this property. Please have a consultant perform the following:

- **Continue to collect water supply samples** and analyze from VOCs via EPA Method 524.2. Monthly sampling of the water supply can be discontinued after 6 consecutive rounds.
- **Screen indoor air.** Look for olfactory or PID indications of vapor intrusion.
- **Conduct a confirmatory monitoring well sampling round.** Please collect groundwater samples from the monitoring well network and submit for analysis via EPA Method 8021B. If possible, this should be conducted via low flow sampling technique. Please measure groundwater elevations and calculate flow direction and gradient.
- **Submit a summary report that outlines the work performed, as well as provides conclusions and recommendations for further site work.** *As appropriate* include analytical data; a site map showing the location of any potential sensitive receptors, monitoring or sample locations, groundwater flow direction; and an area map.

Please have you consultant submit a work plan and cost estimate within 15 days of receiving this letter. Feel free to call me with any questions you may have. I can be reached at (802) 241-1081.

Sincerely,



Alex Geller
Environmental Analyst
Sites Management Section

CC: James Gascoyne, REA w/o enclosure (via e-mail)