

Perchlorate plume shows movement

By Carrie Simmons/ Staff Writer

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The perchlorate plume appears to have migrated away from the quarry pond west of North Street near the new Highway Department garage, according to recent water samples taken by the Massachusetts Department of Environmental Protection.

Although the agency has not come to any conclusions based on the test results, the concentration of perchlorate in the quarry pond - which sits atop a hill - has dropped, while perchlorate levels in surface water at lower elevations have risen, according to Ed Coletta, a spokesman for the DEP.

The sample taken at the quarry pond near the new Highway garage indicated that the concentration of perchlorate had dropped from more than 800 parts per billion (ppb) to 99.6 ppb, while perchlorate in water taken from a detention pond across from the road leading up to the new Highway garage increased from 25 ppb to 116 ppb.

Perchlorate was also detected in a surface water sample taken at the Stony Brook near the Cote Well at a level of 5.45 ppb. A sample taken in the same location in early September detected only a trace amount of perchlorate below 1 ppb.

"We're definitely looking at that to see how that occurred," said Coletta. "We have really made no conclusions on it at this point."

Although there are no federal or state standards for perchlorate, the DEP advises sensitive populations including pregnant women, infants and children up to the age of 12, and people with hypothyroidism against consuming water that has tested over 1 part per billion. The water is safe to drink up to 18 parts per billion for the general population.

Samples taken from residential wells on Groton Road, Unicorn Drive and Cowdry Hill Road came back clean, indicating that perchlorate has not migrated to private wells north or west of the contaminated quarry pond.

The DEP is still waiting for final results for samples taken at the Winchester property on Emily Way, where perchlorate was detected at levels above 500 ppb.

"At this point, we are trying to take a look at what all these numbers mean," said Coletta. "We are trying to figure out if the plume is moving or not."

Coletta said that seasonal fluctuations in groundwater might affect the concentration levels.

Elaine Major, the Water Department's environmental analyst, said she is not surprised about the migration and, in fact, expected it. However, she would like to confirm the location of the sample collected from the Stony Brook before making any conclusions on the reported contamination.

She said the DEP's explanation of the location of September's sampling did not appear to be from the actual brook.

"I don't think they went far enough to get to Stony Brook," she said.

If perchlorate has contaminated the Stony Brook, Major said it will not affect the town's water supply.

"We don't take any of our water from surface water supplies," she said. "It's all groundwater."

The DEP did not take any additional samples from surface water on the Tresca Brothers Sand and Gravel site and does not plan to take any samples in the future, according to Coletta.

A water sample taken on Oct. 18 from a quarry pond on the Tresca site tested positive for only a trace amount of perchlorate below 1 part per billion, however, Coletta said Tuesday that the DEP has received historical data regarding the types of blasting materials used on the site and the locations where they were used.

The data indicated that perchlorate was used in historic blasting, Coletta said, although he could not say in what quantities.

"We are trying to move systematically through all of the issues," said Coletta. "We are reviewing the information from Tresca and we hope to come to some conclusions in a short time."


Town Manager Steve Ledoux said Tuesday that the DEP had not informed him of the latest sampling results, although



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consultants hired by the town to conduct a perchlorate study will be contacting the agency.

"This is all new information," he said. "This may shed some light on the work that they are doing."

Voters at special Town Meeting in October approved a \$55,000 perchlorate study to evaluate if other homes are susceptible to contamination, to determine what steps can be taken to get the Cote Well back online and protected, and to identify other possible sources of perchlorate contamination in surface water.

The town recently awarded the contract to Comprehensive Environmental Inc. (CEI), which provides environmental engineering and consulting for hazardous and solid waste, as well as for water resources and wetlands.

Special Town Meeting also approved a \$31,000 appropriation to connect a resident whose private well was contaminated with perchlorate to town water.

Ledoux said that an agreement between the town and the resident on Emily Way whose private well was contaminated, and the house is expected to be connected to town water in the near future.

Once the DEP has completed its investigation, a Notice of Responsibility (NOR) for perchlorate contamination will be issued to the responsible party or parties.

Ledoux has been told by DEP officials to expect an NOR for blasting performed by Maine Drilling and Blasting Company for the new Highway garage off North Street.

Data sheets from the blasting company indicated that 10,000 lbs. of a material that contained 20-30 percent perchlorate were used to clear the site, according to Major.

Selectmen Chairman Bob Jefferies has said that the perchlorate-laden blasting materials were not included in the paperwork filed with the Fire Department for the blasting permit, and were used without the town's knowledge.

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