Toxic plume poses threat to Peconic River

BY MICHAEL WHITE | EDITOR

There is a decades-old groundwater plume of volatile organic chemicals that is more than a quarter-mile wide and could stretch as far as a half-mile south of the former Northrop Grumman weapons plant in Calverton, the News-Review has learned. Traces of the toxic compounds have already been found in the Peconic River, and local authorities and community members are concerned that much greater concentrations of chemicals could foul the river within a few years -- if the U.S. Navy doesn't act swiftly to clean it.

"The county health department is taking a position that the Navy is going to have to remediate this plume somehow," said Andrew Rapiejko, a geologist with the Suffolk County Department of Health Services who is overseeing extensive groundwater testing in the area. "This has already impacted one drinking-water well."

The contamination is believed to be moving in a southeasterly direction toward the river and contains trichloroethane, an industrial solvent, and chloroethane, a gasoline additive, as well as other volatile organic compounds, or VOCs, Navy officials said.

One drinking-water well, on property belonging to the Peconic River Sportsman's Club, just south of the former Grumman site and potentially in the heart of the plume, has already been shut down due to VOC contamination. Other wells there are being monitored by the health department and the Navy, Mr. Rapiejko said.

There are no homes or other drinking water wells in the area of the suspected contamination.

The plume likely originated from the weapons plant site, built in 1954, where Grumman workers for years used strong compounds to clear grease from jet engines, Navy officials said.

Grumman operations ended in February 1996. Two years later, the Navy turned much of its property over to the town and the state, except some 350 acres still in need of environmental cleanup.

Tests show dangerous contamination levels

Concerned over limited groundwater test results gathered previously by the Navy south of its property, the health department last summer undertook the digging of 24 test wells of about 50 to 60 feet deep, and about 100 feet apart, along River Road near the Navy land's southern boundary.

The results were astounding. One well tested as high as 1,090 micrograms per liter for VOCs, with two other wells testing in the 800s and 600s. State drinking-water standards are 5 micrograms per liter.

"We were actually surprised at, number one, concentrations higher than 1,000," Mr. Rapiejko said. "The other was the width of the plume, from the first well to the 17th well we had detections. That's about a 1,600-foot stretch [along River Road]."

The health department is currently digging an additional 17 wells along a private service road that reaches south, perpendicularly from River Road, into the hunting club property -- almost all the way to the river.

The results of those tests will be known in about two months, county officials said.

A Navy spokesman said the Navy has been monitoring the area in question, which also stretches from the Swan Lake golf course to the west to Connecticut Avenue in the east, for several years and concluded the chemicals are dissipating naturally before hitting the river to the south.

"To date, the groundwater contamination has been identified near the southern fence line of the Navy property [along River Road] and the concentrations decrease toward the river," said Jim Brantly, a Navy spokesman. "In addition, testing conducted in some of the older wells over time have indicated a general decrease in concentration ... a process known as natural attenuation."

He noted that VOCs eventually disappear after hitting an open stream or river and do not bioaccumulate, or remain in the tissues of aquatic organisms.

The Navy will be trying to better locate the sources of the contamination and "will be re-evaluating options for more aggressively dealing" with contamination to the north, he said.

Results from the county's tests will help the Navy figure where it should place permanent test wells to better monitor the plume, Mr. Brantly added, though he did not say whether the Navy would take action to clean up the southern, off-site portions of the plume if the county's most recent VOC tests come in high.

Community urges the DEC to pressure Navy

The Navy's apparent willingness to let nature determine the course of the VOCs has community members on the Navy's Restoration Advisory Board ¬-- a group that meets with the Navy to discuss its progress in cleaning up its land -- deeply concerned.

After last Thursday's meeting in Calverton, community members expressed frustration with the state Department of Environmental Conservation for not trying to force the Navy into taking remedial action on the plume. Under the state's Wild, Scenic and Recreational Rivers Act, they maintain, it's illegal in New York to allow VOCs to slip into the protected Peconic River.

"The community feels it's inconsistent to have a river that's protected in so many ways, yet we allow this groundwater plume to migrate toward it," said Bill Gunther, the community co-chair of the advisory board. "I was encouraged by the Navy at least putting in additional wells to at least learn as much as they can, but I'm still concerned that even when they find the numbers they won't do anything because they're still in the mind-set that this will take care of itself."

The advisory board is made up of county, state, community and Navy representatives.

Another community member on the board, Jean Mannhaupt, of Manorville, said that if county officials are willing to take a strong stance on the plume, then the state DEC should back the county.

"The DEC should do its job and recommend the Navy spend the money and clean it up," she said. "Do we really want to find out five, seven years from now there's a massive plume we could have cleared up now? God forbid down the road they put houses there."

Although the Navy foots the bill, the DEC oversees all remedial efforts in and around the Navy property.

DEC officials are calling for patience.

"There haven't been any significant levels shown in the river itself, so this whole process is about determining how significant this is, to determine what level of protection is required," said Lori Severino, a DEC spokeswoman in Albany. "These are protected natural resources, so the Navy is certainly going to remediate where necessary. You can't just go in and remediate unless you have the data, ultimately collected by the Navy."

"What Suffolk County is doing is preliminary and is extremely helpful and this is something that needs partnership," she added. "But this is a lengthy process. You want to make sure it's done correctly and the best course of action is utilized."

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Short-term exposure to high levels of some VOCs can cause headaches, dizziness, light-headedness, drowsiness, nausea, and eye and respiratory irritation. These effects usually go away after the exposure stops. In laboratory animals, long-term exposure to high levels of some VOCs has caused cancer and affected the liver, kidney and nervous system.

Source: New York State Department of Health