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## What Seeps Beneath

By VALERIE COTSALAS

PAUL GRANGER, the superintendent of the Plainview Water District, had to shout over the sound of a 150-horsepower pump as it sucked 995 gallons of water a minute up from a layer of sandy soil 400 feet underground.

"A lot of people don't realize that their water comes out of the ground right underneath them," Mr. Granger said, standing inside the small brick building that houses the pump on the front lawn of the district's headquarters on Manetto Hill Road. That underground water supply, or aquifer, supplies the drinking water for nearly three million people living on Long Island.

But for two decades, a dangerous and fast-moving gasoline additive called M.T.B.E. has been leaking from underground tanks at gas stations in Nassau and Suffolk Counties - including near the Plainview pump - and if left untreated, M.T.B.E. will remain in the aquifer for years, threatening the drinking water.

Hundreds of locations all over the Island have been identified as M.T.B.E. spill sites, and battles over who will clean them up - at a cost that could run into billions of dollars - are being fought in the courts. In even trace amounts, M.T.B.E., or methyl tertiary butyl ether, makes water smell and taste like turpentine, and the federal Environmental Protection Agency has reported that laboratory rats developed cancer when exposed to high doses.

M.T.B.E. has also been a factor in deliberations over national energy policy. A push in the House of Representatives to provide the oil industry with immunity from liability for M.T.B.E. contamination led to an impasse on the energy bill last year, and the immunity effort this year was abandoned only last weekend.

Water districts and communities across the Island have filed lawsuits seeking payment for cleaning up and monitoring water. And the spills are everywhere.

There are 349 active M.T.B.E. spills being cleaned up or under investigation on Long Island, said Peter A. Scully, the director of the State Department of Environmental Conservation's Long Island office. But according to Toxics Targeting Inc., which compiles environmental-spill data in the state for water suppliers, municipalities and lawyers, there are at least 615 gasoline spill sites or leaking gas tanks containing M.T.B.E. in Nassau County and at least 610 in Suffolk.

In Plainview, 2 of the 11 wells that Mr. Granger oversees are about 400 feet from a former Mobil station where in 1997 a ruptured fuel tank was discovered to be leaking gasoline containing M.T.B.E. At the groundwater level there in 2002, "the concentration my experts have obtained is 20,000 parts per billion of M.T.B.E.," he said. The state maximum for drinking water is 10 parts per billion.

After the discovery of the looming M.T.B.E. plume, Mr. Granger, a civil engineer and the former chairman of the Long Island Water Conference, a 50-member group of Nassau and Suffolk water suppliers, called public meetings to inform residents in Plainview and nearby Old Bethpage. His district installed three monitoring wells about 100 feet from the water well nearest the gas station.

The Exxon Mobil Corporation is paying to clean up the soil and groundwater under the spill, said Mr. Scully, of the Department of Environmental Conservation. Readings taken in January show M.T.B.E. concentrations had been reduced by 66 percent to fewer than 7,000 parts per billion, he said, and monitoring and cleanup will continue until the spill is below allowable levels.

Still, Mr. Granger says he awaits the day that M.T.B.E.-contaminated groundwater gets sucked uphill to the supply well as it pumps 1.7 million gallons of water a day.

"It's not a matter of if, it's a matter of when," he said.

When M.T.B.E. is detected, wells will have to be shut down and the water diverted to treatment systems that can cost up to \$8 million a well, Mr. Granger and others say.

The district sued Exxon Mobil in 2002 in State Supreme Court in Nassau County in an effort to force it to clean up the groundwater and pay Plainview's water-treatment and monitoring costs; Shell was later added as a defendant. The suit also seeks punitive damages of \$1 billion or more, said Marc J. Bern, of the law firm Napoli Bern, which also represents the towns of Southampton and East Hampton in other M.T.B.E. lawsuits.

Estimates for removing M.T.B.E. from the nation's groundwater vary widely - from \$1.5 billion for cleanup not covered by established funds, as reported by the American Petroleum Institute, to \$85 billion, based on an analysis commissioned by the American Water Works Association and the Association of Metropolitan Water Agencies.

Mr. Bern estimated the cost "to fully clean the water system and make it viable for generations to come" on Long Island at \$30 billion.

Just who will pay the bill remains unanswered.

Earlier this month House Republicans led by Joe L. Barton of Texas abandoned their attempt to protect oil companies from M.T.B.E.-contamination lawsuits with a liability waiver in the energy bill. Mr. Barton proposed an \$11 billion cleanup fund financed by the oil industry and federal and state governments. But the waiver was removed, and the final energy bill will not address cleanup and remediation costs.

at all.

The courts may now decide who pays for the cleanup.

A lawsuit filed in Federal District Court in Manhattan by many Long Island water districts and communities seeks groundwater cleanup, compensation for monitoring and water-treatment costs and punitive damages from more than 70 oil companies, oil refiners and M.T.B.E. manufacturers.

Water suppliers and municipalities that have discovered M.T.B.E. contamination in or near wells and are part of the lawsuit include the Suffolk County Water Authority, which supplies 83 percent of the county; the Long Island Water Corporation, which supplies water to 30 Nassau communities including Baldwin, Hewlett and South Hempstead; water districts in Franklin Square, Roslyn, Hicksville, Port Washington, Westbury, Carle Place, West Hempstead, Western Nassau and Great Neck North; Nassau County; and the villages of Sands Point, Mineola and Hempstead.

Who may be liable is another issue. It is often impossible to tell which company is responsible for a particular spill, because oil companies commingle their gasoline inside the delivery pipeline and because gasoline plumes with M.T.B.E. travel long distances underground.

In April, however, Judge Shira A. Scheindlin of Federal District Court ruled that the lawsuit can seek damages based on a shared liability; each oil company or refinery would pay based on its market share.

"That is an extremely important decision," said Stanley N. Alpert, an environmental lawyer and a former assistant United States attorney and chief of environmental litigation for the Eastern District of New York, which covers Long Island. "It's a very important decision that the oil companies will be held liable for their actions."

M.T.B.E. was first added to gasoline in 1979 to raise the octane level. The 1990 Clean Water Act required gasoline to include an oxygenator - M.T.B.E. is one, although not the only one - to reduce air pollution, leading to an increase in M.T.B.E. concentration.

Several safer and more biodegradable compounds could have been done the job, lawyers for water suppliers and towns and villages say, but oil companies lobbied to make M.T.B.E. the additive used. That saved the refiners money.

"The oil companies chose M.T.B.E. knowing of its propensity to contaminate groundwater," said Steven J. German, a lawyer with Weitz & Luxenberg, a Manhattan firm representing several Long Island water suppliers in the federal lawsuit.

Mr. Alpert said: "These companies knew that they were putting a dangerous product into the ground. The oil companies hid it from Congress, hid it from the public, hid it from mom-and-pop gas station owners. They were told by hydrogeologists, 'Don't put this in the gasoline,' but they did it anyway."

The liability for M.T.B.E. cleanup lies with the government, said Peter John Sacripanti of McDermott Will & Emery, the lead lawyer for Exxon Mobil in the federal lawsuit. "The E.P.A. and Congress knew of the characteristics of M.T.B.E. and nonetheless mandated its use," he said, "because they felt that its benefits to clean air outweighed any risk to the groundwater."

Mr. Sacripanti said that the oil industry used M.T.B.E. and not another compound because no other oxygenator was available in sufficient supply to meet Congress's mandate for reformulated gasoline, which was intended to cut carbon monoxide emissions.

"My client spent hundreds of millions of dollars to retrofit its refineries to make M.T.B.E. to comply with reformulated gasoline requirement," he said.

At least 36 states have found M.T.B.E. in their water supplies. New York State joined 23 other states and banned it as of January 2004, but that action does not remove the danger already moving in the aquifer.

"It could take hundreds of years for M.T.B.E. to pass through the system, and that does concern us," said Paul Ponturo, the public health engineer for the Office of Water Resources of the Suffolk County Health Department. "We will have to monitor for M.T.B.E. for many generations."

He said that Suffolk has about 1,000 public supply wells and more than 40,000 private wells, which are much shallower. M.T.B.E. is found in more than 10 percent of public wells and about 10 percent of the 1,000 private wells it checks each year, he said.

Concentrations are usually below the standard for safe drinking water, 10 parts per billion, Mr. Ponturo said, but concentrations as high as 1,300 parts per billion have been found, and those wells were shut down.

People in primarily rural areas of Suffolk County whose private wells have been affected by an M.T.B.E. plume have complained of asthma, nausea and dizziness. Some say M.T.B.E. caused their cancers.

The Suffolk authority, the Island's largest water supplier with more than 500 wells, has detected M.T.B.E. at more than 200 wells over the past five years; the authority can detect levels down to one part per billion. It does not know the source.

Wells with levels exceeding the state's maximum of 10 parts per billion, one of the most stringent in the country, have been shut down, said Timothy Hopkins, the authority's general counsel. "We have put treatment systems on wells where there has been detection of M.T.B.E.," he said, adding that the authority's water is safe to drink.

M.T.B.E. is more difficult than other contaminants, like degreasers and solvents, to remove from water using the most common method, called air stripping. Complicating matters, no one knows the full extent of contamination of the main aquifer on Long Island.

The contamination will worsen, said Walter Hang, the president of Toxics Targeting.

"If you think we have problems now, they're really just a harbinger of things to come," he said. "That's why it is so imperative to take action now to clean up the contaminant before it spreads even farther."

Mr. Granger, of the Plainview Water District, said that because neither Exxon Mobil nor the Department of Environmental Conservation fully investigated the Plainview plume, he was not sure how much M.T.B.E. would contaminate the Plainview wells or what size equipment would be needed to remove it. But he said that once the contaminant is detected in a well, it will have to be shut down for as long as a year to install a treatment system.

The Mobil station in Plainview has since closed, replaced by new businesses. But three years ago, a leak involving M.T.B.E. was discovered at a Shell station across from the former Mobil station. And there is a third gas station at the same intersection, although no leak has been detected there.

But having the gas stations there and few public funds to clean up future leaks will most likely mean more court battles and more legal and water-treatment fees.

"My concern is, 5 to 10 years down the road, will we have more wells hit?" Mr. Granger said. "Then who will bear the brunt of the cost?"

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