

# Toxic threat from perchlorate plume slowly recedes

January 31 2013, by Paul Rogers

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Ten years ago, community leaders were shocked by the discovery that a company that manufactured road flares here had disposed of toxic chemicals improperly, creating a 10-mile-long underground plume of perchlorate, a chemical used in rocket fuel.

The [perchlorate](#) tainted hundreds of drinking [water wells](#) in southern Santa Clara County. It was the most high-profile pollution case in [Silicon Valley](#) since 1981, when industrial solvents from IBM and Fairchild Camera were found to have contaminated groundwater in South San Jose, ending high tech's image as a clean industry.

"People worried about the health impacts but also about 'How am I going to sell my house?' " said John English, a longtime San Martin resident.

After a decade of cleanup work and millions of dollars in studies, however, the perchlorate problem is now slowly ebbing into history.

The plume, which once stretched from Morgan Hill to Gilroy, has shrunk from 10 miles long to 1.75 miles long today.

In 2004, there were 188 domestic drinking water wells with perchlorate levels exceeding California's health standard of 6 parts per billion. Today, there are nine.

Homes are selling again in the area. And a community group that met regularly for eight years to discuss cleanup plans, lawsuits and health

issues hasn't met in nearly two years.

"It's the longest plume I've ever seen, and quite frankly it's been cleaning up pretty quickly," said Dean Thomas, an engineering geologist with the Central Coast Regional Water Quality Control Board who is overseeing the case.

The board ordered Olin - the chemical company that owned the facility at Tennant and Railroad avenues in Morgan Hill, where it made flares from 1955 to 1996 - to pump and clean the groundwater. To date, more than 300 million gallons of water has been drawn up through a series of wells, cleaned with ion exchange systems and put back in the ground. Rainwater has also diluted much of the pollution.

But it could take 20 years for all the perchlorate to be out of the groundwater, Thomas said. And some of the health concerns of a decade ago still persist today.

Perchlorate is a salt used in explosives, flares and air bags. It can inhibit the uptake of iodide, disrupting the thyroid's ability to produce hormones needed for growth and development, along with a healthy metabolism.

No significant spikes in health problems have surfaced among residents of the tight-knit rural communities along Highway 101. However, no formal studies have been done seeking to document any, according to Santa Clara County public health officials. And for some residents, the issue hasn't gone away.

"My water is still dirty. We just don't drink it," said Teresa Pereira, 49, who lives on Columbet Avenue in San Martin.

Pereira, her husband, Tony, a fencing contractor, and their two daughters

had their well polluted by perchlorate. Because families in the area don't receive city water - their wells are their only water source - state regulators required Olin to provide bottled water to every family whose well showed levels above 6parts per billion.

The Pereira family's well had nearly double those levels, finally falling below the standard by 2010. Olin stopped deliveries of bottled water.

Concerned that perchlorate levels fluctuate close to the standard in their well, the family spends \$210 a month to have Crystal Springs truck in 31 5-gallon bottles to their home. The family also spends \$126 four times a year to pay for private testing for their well.

"You have to make the best of it," Pereira said. "What are you going to do?"

In 2005, her family was among a group of homeowners who sued Olin, seeking \$36 million for emotional distress and lost property values.

"No one at that time would buy your house if you were on a well," Pereira said. "When I went to get a refi, they wouldn't give it to me."

But a federal jury in San Jose district court found in favor of Olin after the company's attorneys argued that property values in the area had increased at a similar rate as property values across San Jose.

"It made us realize that big business really doesn't care about anybody," she said.

Rick McClure, an official with Olin, said the firm would have no comment.

Based in Clayton, Mo., Olin is a major chemical company that produces

ammunition through its Winchester Ammunition brand, along with chlorine, hydrochloric acid, bleach products and other chemicals.

In 2005, McClure said that Olin had spent \$20 million on cleanup, studies and paying for bottled water for residents.

The fact that the company has deep pockets, with \$2 billion in sales last year, helped speed the cleanup, some experts say.

"If they were a mom-and-pop company, it would be a lot bigger problem still. But Olin had the resources, and their response has generally been pretty good," said George Cook, an associate engineering geologist with the Santa Clara Valley Water District.

Olin's pollution, which was caused by employees rinsing out flare-making equipment into an unlined basin, has cost the public money. Morgan Hill has spent an estimated \$5.4 million creating a new municipal well to replace one that was contaminated, along with installing a treatment system on another municipal well.

The city recouped \$779,000 from Olin then raised water bills 15 percent for several years to pay for the rest, rather than risking a long and costly legal battle with the company, City Manager Ed Tewes said. Similarly, the Santa Clara Valley Water District, which sued Olin and recovered some of its costs, says the whole episode cost it \$4.7 million, which it recouped by raising South County water bills \$2.58 a month for two years.

Despite the high costs, many involved in the saga say the community has turned a corner.

"Things seem to be going reasonably well," said English, of San Martin. "The trend is in the right direction. But it has been a long haul."

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