

Cancer-Causing Chemical TCP Plagues California Drinking Water

by Ronan Farrow and Rich McHugh

ARVIN, Calif. — In the Central Valley of California, hundreds of wells that provide water to a million people are tainted with a chemical that some experts say is one of the most powerful cancer-causing agents in the world.

The state is poised to take the first step Tuesday to regulate the substance — called 1,2,3, TCP — but test data compiled by an activist group show it's also been detected by utilities across the country.

Some who live in this lush farmland believe it's to blame for the health problems of their family members and neighbors.

"The word that really captures all of it is 'outrage,'" said Jerry Tinoco, 45, who is from the city of Arvin and says at least three close family members have been diagnosed with cancer. "It's a man-made chemical, so someone is to blame."

There's no research showing the chemical has caused cancer spikes in specific communities, but some residents and experts told NBC News that research simply has yet to be done in towns like Arvin.

How dangerous is TCP? The Environmental Protection Agency has concluded it's "likely to be carcinogenic to humans," and the California water board warns residents not to shower with tainted water because they might inhale the chemical.

Paul Tratnyek, a professor at the Institute of Environmental Health at Oregon Health and Science University who studied TCP for the Defense Department, said few other chemicals match its toxicity.

"Even the slightest amount of TCP in the water would be considered to be a potential health effect," Tratnyek said.

NBC News was in Arvin as the city tested the water for TCP. A state-certified lab found more than six times the amount the state says is acceptable.

"Arvin is poor. But they deserve to live," local resident Maggie Medina said. "They deserve clean water. They didn't create this problem."

TCP is a degreasing agent used in the production of plastic products. Lawyer Todd Robbins says the chemical's presence in water supplies across California's Central Valley is largely attributable to two industrial giants that recycled TCP by packaging it with agricultural pesticides.

"TCP got into drinking water in the Central Valley because Dow Chemical Company and Shell Oil Company saw an opportunity decades ago to take a hazardous waste stream at their chemical plants, put it in barrels and sell it to farmers, who would then inject it into the ground," Robbins said.

"That's how it started."

Robbins represents 30 communities that are suing Dow and Shell to get them to pay for the multi-million dollar filtration process required to clean water supplies.

The companies prevailed in a 2010 lawsuit filed by the city of Redlands, California, but they have settled other suits and recently lost their first, to a Central Valley city two hours north of Arvin. A jury awarded Clovis, California, \$22 million to treat contaminated water and remove TCP from its wells.

Among the documents Robbins has collected is an internal memo in which Dow scientists called TCP "garbage," acknowledging that it had little utility in killing pests. Another memo, from Shell, raises concerns about the chemical's toxicity to animals.

"By at least 1970, the companies knew that it posed a direct risk to groundwater, were advised by their own internal engineers and scientists to do something about it, and they failed to do so," he said.

Dow and Shell declined requests for interviews, and Dow declined to comment.

In a statement, Shell said that the product in question has been out of use for years, that it contained only "trace amounts" of TCP and that it was approved by the federal and California governments. The company added that the product was "beneficial" and that TCP was also present in other products, made by other companies.

The companies also point out there have been no studies that prove TCP causes cancer in humans.

But Jenny Rempel of the Community Water Center, an advocacy group, said animal studies are frequently used to set public health standards. In fact, that's what California relied on when it set the level at which water providers must inform residents of contamination.

Now, the state is going beyond that, with the water board scheduled to vote on whether to would require cleanup efforts once TCP reaches a certain threshold.

The precedent set by California on Tuesday could be important nationwide. The Environmental Working Group, an advocacy organization, collected data from water utilities nationwide and concluded that TCP has been detected in at least 17 states, serving millions of people. EWG currently lists 13 on its website, but will be updating the list to include four more states.