Injection Wells
The Hidden Risks of Pumping Waste Underground

Polluted Water Fuels a Battle for Answers

Rev. David Hudson Jr. has been fighting for a decade to get Texas and the federal Environmental Protection Agency to investigate whether underground injection caused heavy metals and other contaminants to get into the drinking water in DeBerry, Texas. (Photo by Abrahm Lustgarten)

by ***Abrahm Lustgarten***
ProPublica, June 21, 2012, 8:01 a.m.

For the better part of a decade, Rev. David Hudson has been fighting to uncover what's polluting the water in his home town.

Hudson moved to DeBerry, Texas, a poor, predominantly black community straddling the Louisiana border in 2002.

DeBerry lies in the heart of the Haynesville Shale natural gas development. When Hudson moved in, the area was littered with injection wells used to deposit waste from oil and gas drilling deep beneath the earth.

The well sites – often located just a few yards from residents' doorsteps – were busy industrial zones clogged with truck traffic and holding tanks. Oil stains spattered the ground around pipes where waste was pumped underground.

Hudson said he soon noticed that his well water had a metallic flavor and a sharp smell. Congregants in his church told him theirs was cloudy and salty to taste, leaving rings in toilets and sinks. They said they had been complaining to Texas officials since 1996, yet no one had investigated.

"Our cries, they just fall on deaf ears," Hudson said.

Shortly after moving to DeBerry, Hudson sent water from his well and four of his neighbors' to be tested for pollutants. The results showed high levels of chlorides, chemicals found in drilling waste, a federal report said.

According to the report, Hudson shared the tests with Basic Energy Services, the company that operated the waste wells nearby, which sent them to the Railroad Commission of Texas, the agency that regulates disposal wells for oil and gas drilling waste.

Nearly a year after receiving the material, commission officials tested DeBerry's water themselves, confirming that it contained arsenic, cadmium, lead, benzene and other substances. The contamination was extensive enough that they advised DeBerry residents not to drink their water, leaving Hudson and others to purchase bottled water.

In 2004, Texas officials ordered the injection wells in DeBerry to be permanently shut down. A series of 30-foot monitoring wells were drilled to test for leaking waste around the area, and one deeper well was drilled to take samples from 170 feet below. None of the data collected enabled the Railroad Commission to determine the cause of the pollution, however.

To Hudson and others, there were powerful clues in the commission's own records, which showed that one of the injection wells had a history of problems. In 2000, a Louisiana trucking company illegally dumped thousands of gallons of hazardous waste from an oil refinery into it, material far more dangerous than the well was allowed to accept under government regulations. Five years later, a mechanical integrity test detected a crack in the well structure that allowed waste to leak.

"Produced water was observed flowing from between the surface casing and the production casing," a Railroad Commission official wrote to Basic Energy Services in Feb. 2006. "RRC staff requests that Basic immediately evaluate the need for further environmental investigation of groundwater."

Still, federal and state regulators struggled to obtain a definitive answer about what caused the pollution.

According to a 2007 report by the U.S. Environmental Protection Agency's inspector general, the Railroad Commission had a difficult time getting Basic Energy to cooperate. The agency ordered the company to drill additional deep disposal wells to monitor DeBerry's water, but the company refused.

"Basic Energy Services informed the State that it did not believe the contamination was its responsibility, and since the freshwater well had been plugged, deeper groundwater testing could not be conducted," the inspector general's report said.

Basic Energy Services did not return a call requesting comment.

The Railroad Commission told ProPublica that it had done everything it could to solve the mystery.

"The commission investigation did not identify a large plume of hydrocarbon and saltwater in the groundwater that connected the former… facility to residents' water wells," said Ramona Nye, a spokeswoman for the agency. "Commission staff address all water well complaints promptly and base their decisions on science and fact."

Unsatisfied with the state's progress, federal EPA officials took over the investigation in 2005 under the Superfund program, ordering more water sampling around the injection wells. For the first time, a decade after the saga began, the EPA also began supplying bottled water to DeBerry residents.

By 2007, however, the EPA also concluded that injection wells played no part in DeBerry's water contamination.

"A range of surface activities including septic systems, surface spills and/or agricultural and domestic practices caused the ground water contamination," an EPA spokesperson told ProPublica in an April, 2012 email. "Comprehensive review of the admin record for the injection wells in question indicated no ground water contamination from the wells."

The EPA declined to allow any of its staff in Texas to be interviewed for this story, sending written responses to several questions.

The 2007 inspector general report suggested the EPA's conclusion may have been premature, however.

"Region 6 personnel told us they believe evidence shows the contamination did not originate from the injection well," the inspector general's report states. "Neither the State nor EPA has conclusively determined the source of the contamination… The full extent of the contamination, its lateral limits, its depth, and its migration patterns or movement along the groundwater plume is not known."

Earlier this month, EPA officials returned to DeBerry to sample five public drinking water wells, in "response to community concerns,"

according to a statement sent to ProPublica by the agency Wednesday. The agency did not respond to questions about whether it was reconsidering its previous conclusions.

Hudson has little hope that the renewed scrutiny will yield closure.

“We will always have a problem proving the contaminants are coming from injection wells. You’d have to have a camera underneath the ground somewhere,” Hudson said. “Even if they find oil and gas carcinogens in the water, they are going to find another way to say it came from somewhere else. Nobody wants to say what the cause was.”

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