

Review finds no direct link between fracturing, tainted water

Tom Fowler, Houston Chronicle, 11-9-11

Preliminary results of a University of Texas study on hydraulic fracturing indicate the process itself does not appear to contaminate drinking water, but that fracturing sites may have a higher incidence of surface problems that can occur with any type of drilling.

Prior reports, investigations and data gathered throughout the country on claims that the process often called fracking contaminated ground water so far don't make the direct link, said Chip Groat, a UT geologist who is leading the study.

Rather, it appears that shale drilling results in more problems on the surface than drilling that doesn't involve fracking, including spills of drilling and fracking fluids, leaks from wastewater pits and other rule violations, said Groat, who is unveiling the preliminary results of the study in Fort Worth on Wednesday.

The study also found regular reports of problems with surface casing - the steel pipe installed at the top of a well to keep the flow of hydrocarbons isolated from aquifers - and with cement jobs that hold the casing in place, Groat said, but there's no evidence that these incidents have resulted in significant ground-water contamination.

But those problems could occur with any type of oil and gas drilling project, he said.

The UT researchers are still gathering and analyzing data from a number of states, Groat said. Final results will be published in the coming months.

Hydraulic fracturing is used to produce natural gas and oil from dense shale and sand formations. The process injects millions of gallons of water, mixed with sand and chemicals, to break apart and hold open the dense shale formations, releasing the hydrocarbons.

The approximately 5 percent of the mix that isn't water can contain a wide range of chemicals, including ones considered toxic or dangerous in some circumstances. Surface spills of the fracking fluids have killed livestock and fouled waterways. Across the country, homeowners near drill sites contend that natural gas or chemicals related to fracking have infiltrated drinking water.

The Environmental Protection Agency started a study of hydraulic fracturing safety this year, with an in-depth report expected in late 2012.

Groat, who served as head of the U.S. Geological Society under the Clinton and George W. Bush administrations, said the UT study was launched in response to hyperbole about the issue from both sides.

"The goal is to simply separate fact from fiction," Groat said. The Environmental Defense Fund is taking part in the study, in addition to a number of UT faculty.

Data kept by the Texas Railroad Commission, which regulates oil and gas operations in the state, show 311 complaints about possible contamination of drinking water wells from Jan. 1, 2006 to Sept. 28 of this year.

But commission spokeswoman Ramona Nye said there has been no confirmed complaint of natural gas in drinking water associated with any failed cement job.

Quarterly data compiled by the Pennsylvania Department of Environmental Protection indicates poor cement jobs are regularly reported as violations of state regulations. In May, state officials fined Chesapeake Energy more than \$1 million when improper well casing and cementing allowed gas from shallow, non-shale gas formations to migrate into the groundwater used by 16 homes.

Most state regulations related to monitoring and protecting groundwater from drilling and production were written before shale gas development was common, Groat says, and that somewhat limits the ability to assess the impact of shale drilling.

Groat said the UT review discovered that the scientific community has done relatively few studies around the key issues that are in dispute.