



## United States: Federal Government Study Confirms Hydraulic Fracturing Does Not Contaminate Drinking Water

Last Updated: July 29 2013

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The Department of Energy ("DOE"), after a year-long study at a western Pennsylvania drilling site, has concluded that there is no evidence that chemicals used during the hydraulic fracturing process have contaminated drinking water aquifers adjacent to the drilling site. According to DOE geologist Richard Hammack, the study found that hydraulic fracturing fluids remained thousands of feet below the shallower portions of the aquifer that supply drinking water. The study was performed by the DOE's National Energy Technology Laboratory at a drilling site in Greene County, Pennsylvania.

As part of the study, eight wells in the Marcellus Shale formation were monitored seismically and one was injected with four different "tracers" at different stages in the hydraulic fracturing process. The depth of the injection of the tracers was at approximately 8,000 feet below the surface of the well bore. None of the tracers were detected in a monitoring zone at a depth of 5,000 feet. The study also tracked the maximum extent of the man-made fractures, and all were at least 6,000 feet below the surface of the well bore. Finally, the study also monitored a separate series of older gas wells that are about 3,000 feet above the Marcellus Shale formation to determine the impacts, if any, of hydraulic fracturing process on these wells. Ultimately, the DOE study did not detect the tracers in these older gas wells.

One finding did surprise the research team: Seismic monitoring determined that one hydraulic fracture traveled 1,800 feet out from the well bore, whereas most of the other fractures traveled just a few hundred feet. Some opponents of hydraulic fracturing have questioned in the past whether fractures could travel all the way to the surface. Members of the research team have suggested that the 1,800 foot fracture may be the result of naturally occurring faults. Observers, such as Rob Jackson of Duke University, have noted that this finding is interesting, but that the 1,800 foot fracture was still a mile from the surface of the drilling site (and drinking water aquifers).

The DOE cautions that the results of the study are preliminary, as the study is ongoing, but that the results are the first independent examination of whether the chemicals utilized during the hydraulic fracturing process pose a threat to local drinking water supplies. DOE's initial conclusion suggests that hydraulic fracturing does not impact drinking water supplies.

### Media Coverage Resources:

- [Pittsburgh Star Gazette—DOE study: Fracking chemicals didn't taint water](#)
- [National Energy Technology Laboratory statement on study](#)
- [Bloomberg—Fracking Research Finding No Water Taint Near Drill Site](#)

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