



Is Gas Drilling Safe?

Drilling for natural gas and oil has a proven record of safety due to the well-developed technologies and multiple layers of federal, state and local regulations.

Is drilling regulated?

Drilling for and production of natural gas is a highly regulated process. All drilling activity in the state of Texas falls under the jurisdiction of the Texas Railroad Commission (RRC) and is closely monitored by the Texas Commission on Environmental Quality (TCEQ) to ensure that the health and safety of the public and environment are of paramount importance. On top of these regulations are multiple layers of federal regulations, including the Environmental Protection Agency, OSHA and more (<http://www.energyindepth.org/wp-content/uploads/2009/03/Federal-Hydraulic-Fracturing-Process.pdf>). Furthermore, specific city ordinances provide additional regulations on drilling activity to maintain some of the highest safety standards of any industry.

How is groundwater protected?

The RRC requires that wells be constructed using several layers of steel casing and cement in order to protect groundwater. There are seven layers of protection. The first layer is the conductor casing which is cemented in place to protect the surface. Next is the surface casing, a steel pipe encased in cement that travels from the surface through the deepest groundwater level and acts as a protective sleeve through which deeper drilling is performed. It is also cemented in place. The next layer is the production casing, consisting of a pipe that is cemented permanently in place in the wellbore to the well's total depth. Finally, production tubing is placed inside the production casing as an additional layer of protection.

Does hydraulic fracturing release methane into tap water?

The short answer is no. The Environmental Protection Agency (EPA) has performed many studies to answer this question and has not been able to find a link between hydraulic fracturing and methane in fresh water aquifers. What they did find is that methane does migrate in water tables naturally in some parts of the country, especially in areas where there are shallow coal beds and natural gas deposits.

Are the chemicals used in fracturing fluid dangerous?

Of the fluid used in hydraulic fracturing 99.5% is composed of water and sand. The remaining 0.5% comes from chemical additives that perform a variety of functions, such as preventing corrosion, reducing friction and controlling bacteria. Many of these chemicals can be found around the house, in items like swimming pool cleaner, make-up remover and antiperspirant. The chemical additives used in the process have always been included on the material safety data sheets at drilling locations. Drilling companies also voluntarily post the additives at fracfocus.org. A bill recently passed in Texas, HB3328, requires the posting on a well-by-well basis on the same site.



How does hydraulic fracturing affect air quality?

Data from the Texas Commission on Environmental Quality shows that VOC emissions from natural gas sites are less than half those from on-road, non-road and off-road mobile sources (i.e., cars, trucks and other vehicles) and do not contribute to ground level ozone because ozone in the DFW area is caused by NOx from cars and trucks interacting with VOCs, much of which is naturally occurring. As is the case with water quality, hydraulic fracturing is subject to federal, state and local regulations designed to protect air quality.

What about earthquakes?

Scientists have found no link between the drilling that occurs during hydraulic fracturing and seismicity of noticeable size. According to a recently released study by a National Research Council panel, the increase in seismic activity that has been noted around well sites in various parts of the country is not attributable to hydraulic fracturing, but may be caused by the underground injection of well wastewater (http://www.nap.edu/catalog.php?record_id=13355). The study also notes that of the 140,000 disposal wells in the U.S., only a small percentage are potentially linked to seismic activity. The U.S. Geological Survey (USGS) also found that the earthquakes suspected to be caused by wastewater injection were fairly small and rarely caused damage.

Do pipelines pose any dangers to our neighborhoods?

Pipelines are by far the safest method for transporting energy products. Together, the Office of Pipeline Safety (OPS)—a division of the U.S. D.O.T.—and the Texas Railroad Commission regulate, inspect and enforce intrastate gas pipeline safety requirements. The pipelines transporting gas from the well site to processing locations are very similar to normal utility pipelines that currently deliver gas to your home or office. It is extremely important that no one digs without knowing where pipelines are located. A call to 811 is free and someone will come out and mark the locations of pipelines.

How will my neighborhood be affected by an urban drill site?

Each city has ordinances written – or in process of being written – to ensure that any inconveniences or issues are kept at a minimum. Once a well site is completed, fencing is required to keep people out of the site. In some cities, mortar walls are required (built to 8 feet high in some cities) to conceal the equipment as well as mitigate any noise that may come from the work site. Make note of what your city's ordinance specifies in terms of the following provisions: well set-back; noise requirements; road repair agreements; truck routes on private or public roads; fencing and landscaping; leasing and zoning requirements.

If something happens at the site, what is the response plan?

The risks of any dangers extending beyond the actual well site are extremely low. Companies in the industry work very closely with the city's emergency response team to ensure quick and effective response to any accidents. Every city requires an emergency response plan from any company seeking drilling permits, and those plans must be accessible on the well site. In fact, in the state of Texas there have been no reported resident or bystander injuries as a result of a well site accident due to any drilling activity.