

SAFE AND RESPONSIBLE OIL AND NATURAL GAS PRODUCTION



The combination of widespread and systemic application of proven engineering technologies and industry risk management practices and standards have enabled the natural gas and oil industry to achieve new milestones in energy efficiency, public safety and environmental protection. Coupled with a complex web of federal and state regulatory regimes, recommended practices for production ensure that the industry manages operations safely and responsibly.

BACKGROUND:

The oil and natural gas industry carries out operations for safe and environmentally responsible exploration and production of natural gas, crude oil, and associated liquids on lands administered by state and federal authorities, including production via the use of hydraulic fracturing and horizontal drilling in unconventional plays.

REGULATIONS: A comprehensive set of state, local and federal laws address nearly every aspect of exploration and production. These include well design, water use, waste management and disposal, air emissions, surface impacts, health, safety, location, spacing and operations.

States also regulate this activity, and in many ways are best positioned to tailor laws precisely for the local geology and hydrology while also addressing and preventing surface impacts. State regulators continually review their regulations through collaborative efforts with industry.^{1,2,3}

STANDARDS: Industry standards and practices work in combination with federal and state regulations to provide a third layer of environmental protection. Formulated by the industry's standard-setting program, these recommended practices cover all aspects of the industry's work and are consistently updated as a part of the industry's ongoing effort toward continued improvement of operations.

REFERENCES:

1. FracFocus is web-based voluntary chemical disclosure registry led by the Ground Water Protection Council (GWPC) and Interstate Oil and Gas Compact Commission (IOGCC). Launched in April of 2011, FracFocus, now in its third generation, allows operators to post data describing the chemical composition of hydraulic fracturing fluids at one web site, using a simple, informative, and consistent format. The web site provides information on a well specific basis to the public and serves as the reporting mechanism for 23 states (<http://www.fracfocus.org>).
2. From 2009 to 2013, according to the GWPC, state agencies finalized an estimated 82 groundwater-related rules for oil and gas production, including hundreds of discrete rule changes. (<http://www.gwpc.org/state-oil-gas-regulations-designed-protect-water-resources-2014-edition>)
3. The StatesFirst Initiative is a STATE led initiative aimed at facilitating multi-state collaboration and innovative regulatory solutions for oil and natural gas producing states (<http://www.statesfirstinitiative.org/>).

FAST FACTS:

- » According to the U.S. Department of Energy, more than 4 million oil and gas related wells have been drilled in the United States since development of these energy resources began nearly 150 years ago. At least 2 million of these have been hydraulically fracture-treated, and up to 95 percent of new wells drilled today are hydraulically fractured, accounting for more than 43 percent of total U.S. oil production and 67 percent of natural gas production.
- » The average unconventional natural gas or oil well uses 3 million pounds of redundant steel and cement.
- » A three year study completed in February of 2016, by the University of Cincinnati examined water samples three to four times per year from 23 wells in the Utica shale region and found no evidence linking fracking to groundwater contamination, according to Dr. Amy Townsend-Small, a geologist involved with the study.
- » A peer-reviewed Lawrence Berkeley National Laboratory (Berkeley Lab) "found no documented instances of hydraulic fracturing or acid stimulations directly causing groundwater contamination in California."