

What the Frack -- Is Pumping Glass Cleaner Into the Earth OK?

Kevin Grandia, Huffington Post, 6-28-10

As I wrote last week, the natural gas industry is in a bit of a tizzy after the movie Gasland aired on HBO, exposing to a very wide audience the chemical contamination caused by the widespread use of a process called hydraulic fracturing.

The industry should be worried because, as Gasland points out, natural gas extraction is a nasty business.

Hydraulic fracturing is the reason there is so much money to be made in natural gas nowadays. The process makes gas that was virtually impossible to pump out of the earth accessible.

Areas that would have probably never seen drilling are now fair game. Like the Roan Plateau in the Colorado Rockies where a company called Bill Barrett Corporation plans to drill up to 3,000 wells to get at the gas that lies deep below the surface.

The problem is that while the natural gas companies might think hydraulic fracturing (or "fracking") is great for their bottom line, the process involves pumping thousands of gallons of toxic chemicals down into the earth.

While the short-term financial upsides of fracking look good on quarterly reports, the long-term costs of the potential health and environmental damage is speculative at best. What is certain is that pumping thousands of gallons of toxic chemicals deep into the planet is probably not a good thing.

Concerned that underground seepage of fracking chemicals may lead to the poisoning of aquifers or underground drinking water sources, organizations such as The Endocrine Disruption Exchange, based in Panonia, Colorado, have begun monitoring various sources such as material safety data sheets (MSDS), spillage reports, environmental impact statements and Emergency Planning and Community Right-to-Know Act (EPCRA) documents for reported chemical usage.

No surprise that the natural gas industry says there's nothing to worry about, but here is a list of some of the chemicals they are pumping down into the earth:

Formamide

A "reproductive toxicant" that the Center for Disease Control and Prevention says targets organs like the "eyes, skin, respiratory system, central nervous system, [and] reproductive system."

Petroleum distillate

'Petroleum distillate' is a blanket term that could be used to describe a wide range of chemical substances, many of which are as toxic as "naphthalene, xylene, toluene, and benzene...methane, propane, and kerosene." These, according to a report by Purdue University "pose a special health risk if ingested and vomited."

Hydroxyethyl cellulose

The thickening agent Halliburton describes this chemical as a "natural polymer." In a document developed by the Physical and Theoretical Chemical Lab at Oxford University, toxicology information on hydroxyethyl cellulose has it listed as a "severe irritant" and includes the note, "laboratory experiments have shown mutagenic effects."

Glutaraldehyde

A "developmental toxicant, immunotoxicant, reproductive toxicant, respiratory toxicant, skin or sense organ toxicant."

Ammonium persulfate

An immunotoxicant and respiratory toxicant.

These are just a few of the chemicals and the Endocrine Disruption Exchange has reports of another 344 chemicals operating as frack fluid additives as of February 2009.

But here's the thing, I don't know what is more insidious, pumping thousands of gallons of immunotoxicants, mutagens other nasty things into our planet's core, or the public relations spin the natural gas companies try to put on all this by listing these toxic agents as they are found in common household goods.

You can see what I mean in this helpful brochure [pdf] put together by one of the largest natural gas companies in the United States, Chesapeake Energy.

Yes folks, don't worry about us pumping isopropanol into the earth because it is also used in household glass cleaners - all very normal, nothing to worry about, nothing to see here folks.

By the way, isopropanol is also considered a potential explosive and according to the US government, "Acute exposure to isopropyl alcohol causes eye and mucous membrane irritation and may cause incoordination and narcosis. Ingestion causes gastrointestinal pain, nausea, vomiting, and may cause coma and death."

Pumping these toxins into our earth is just plain fracked up and it makes clean energy technologies from unlimited sources like the sun and the wind that much more sensible.