

Old technology - but new use: Hydro-fracking needs more scrutiny

Congressman Maurice Hinchey's sponsored FRAC Act - Fracturing Responsibility and Awareness of Chemicals Act - is a good start at a public discussion regarding the need for additional regulations. Hinchey, member of the House Appropriations Subcommittee on Interior and the Environment and member of the House Natural Resources Committee, said, "Our legislation says everyone deserves to have safe drinking water by ensuring that hydraulic fracturing is subject to the protections afforded by the Safe Drinking Water Act. The bill also lifts the veil of secrecy currently shrouding this industry practice." This is not some hypothetical philosophical discussion about what's happening in Alaska or Texas, it's about what's eventually going to happen next door to most of us.

'Decades-old technology'

The gas industry's position is that some in Congress are attempting to further restrict our domestic energy production by attacking a decades-old technology and that the act will take a long-established and safe drilling technology called hydraulic fracturing and redefine the process as some kind of health threat while severely restricting the ability to use it. Hydraulic fracturing is an old technology, however, horizontal drilling and the safe disposal of millions of gallons of contaminated frac water that it will generate is a new challenge. These changes are new and significant and one of the main reasons that the Department of Environmental Conservation is revising their Environmental Impact Statement to incorporate new well spacing and contaminated wastewater disposal requirements into Marcellus Shale gas drilling permits.

One percent equals 10,000 PPM

The Independent Oil and Gas Association of New York's "Home Grown Energy" publication indicates that hydraulic fracturing extracts oil and natural gas through pumping fluids that are 99.5 percent water- and sand-based, with additives "a friction reducer, similar to canola oil, which thickens the liquid; and a bactericide, like chlorine used in swimming pools" and a micro-emulsion element accounting for the remaining 0.50 percent. The public needs to understand that we are talking about chemicals consisting of more than canola oil and chlorine, and that this percentage is a weight-to-weight comparison that uses the weight of the water and the sand to off-set the quantity of chemicals. The sand shouldn't be part of the calculation. It's kind of like a glass of soda that is half full of ice; the flavor is much stronger before the ice melts. A similar thing occurs here mathematically, if the weight of the sand and water are added together, the frac chemicals appear to be much more dilute.

When scientists discuss groundwater contaminants they don't talk in terms of percentages but Parts per Million (PPM) or Parts per Billion (PPB). To put 0.50 percent onto groundwater contamination context, we need to know that one percent equals 10,000 PPM and that 0.50 percent is 5,000 PPM or 5,000,000 PPB. A very small percentage concentration of contaminants can adversely impact a large quantity of groundwater. The Endicott plume beneath vented homes, in most instances, is estimated to be more than 99.999 percent water.

Our support needed

The DEC needs to know the composition of the fracturing fluids so that base line testing of surface water, stream sediments and adjacent ground waters can document conditions before the drilling starts. This would go a long way to counter what appears to be the industry's defense in Pennsylvania; that the gas or contaminants are naturally occurring and probably present before the drilling commenced. We need to give the DEC the time that it needs to develop their revised Environmental Impact Statement and support Congressman Hinchey's bill. It's more important for the DEC to be thorough than fast and applying the protection of the Safe Drinking Water Act to the gas drilling industry is probably long overdue. The gas industry is coming to Broome and surrounding counties and will be here for the next 30 to 40 years. Let's take a little time to discuss and understand the environmental risks so that we can all continue to live here with our new-found wealth.

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