New York Assembly Addresses Toxic Fracing Fluid
By: Martha Goodsell
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In order to extract oil and natural gas from certain rock formations, shale in particular, companies use a technique known as "hydraulic fracturing", which involves forcibly injecting a "fracing solution" into the rock, expanding it and allowing the gas or oil to be released.

Fracing fluid, the liquid used in hydraulic rock fracturing, is 99.4% water according to the New York Department of Environmental Conservation. So if a company uses two million gallons to drill one well, then 12,000 gallons of other ingredients are also used. Fracing fluids typically contain a combination of additional chemicals used to optimize the process. These additives include gels, polymers, biocides, fluid loss agents, thickeners, enzyme breakers, acid breakers, oxidizing breakers, friction reducers, and surfactants.

According to various sources, fracing solutions currently used by energy companies typically contain potentially toxic substances such as biocides, acids, metals, ethylene glycol, corrosion inhibitors, and diesel fuel, which contains benzene, ethylbenzene, toluene, xylene, naphthalene and other chemicals. Dozens of additional chemicals may also be used, such as: polycyclic aromatic hydrocarbons; methanol; formaldehyde; ethylene glycol; glycol ethers; hydrochloric acid; sodium hydroxide; arsenic, selenium, copper, cadium, lead, molybdenum, chromium, mercury and zinc.

The EPA states that many chemicals in hydraulic fracturing fluids are linked to human health effects. These effects include cancer; liver, kidney, brain, respiratory and skin disorders; birth defects; and other health problems. For example benzene, toluene, ethyl benzene and xylenes (BTEX), all found in diesel fuel, are known as volatile organic compounds. Benzene is a known carcinogen. Toluene may affect the reproductive and central nervous systems while ethylbenze and xylene may cause respiratory and neurological effects. Heavy metals such as arsenic, barium, cadmium, chromium, lead, mercury are also known carcinogens. Nitrogen oxides are known to react with common organic chemicals to form toxins that may cause biological mutations.

According to one Oil and Gas Accountability Project report, “Drinking Water at Risk”, very small quantities of some of these chemicals are capable of contaminating millions of gallons of water.

The report references a paper from the Argonne National Laboratory that reports: “several chemicals used during hydraulic fracturing operations (i.e., biocides, corrosion inhibitors, breakers, organic components such as benzene and naphthalene) can be lethal at levels as low as 0.1 parts per million”. (J.A. Veil, M.G. Puder, D. Elcock, and R.J. Redweik Jr.; 2004; A White Paper Describing Produced Water from Production of Crude Oil, Natural Gas and Coalbed Methane Prepared for U.S. Department of Energy by Argonne National Laboratory; pp. 7, 8. http://www.ead.anl.gov/pub/dsp_detail.cfm?PubID=1715)

The report also references data found in a draft report from the U.S. Environmental Protection Agency (EPA), which showed that even when diluted with water in preparation for injection, at least nine hydraulic fracturing chemicals pose a threat to human health. According to the report, these chemicals are: benzene, phenanthrenes, naphthalene, 1-methylnapthalene, 2-methylnapthalene, fluorenes, aromatics, ethylene glycol and methanol. (U.S. Environmental Protection Agency (EPA); June, 2004; Evaluation of Impacts to Underground Sources of DrinkingWater by Hydraulic Fracturing of Coalbed Methane Reservoirs; EPA Document# 816-R-04-003. pp. 4-5; http://www.epa.gov/safewater/uic/cbmstudy.html)

Yet in 2005, the oil and gas industry was granted an exemption from the Safe Drinking Water Act and to date they receive little oversight from the EPA. Few of the chemicals used in fracturing are required to be reported; they simply are not on the list of synthetic chemicals needing to be monitored under the Act by the EPA. This does not mean, that the non-listed chemicals are harmless. At present, the risks are merely undeterminable.

According to “Drinking Water at Risk”, three actions are needed immediately: first, the EPA should regulate fracking fluids under the Safe Drinking Water Act; second, all toxic fluids should be eliminated; and third, methods for public accountability must be put in place.

There are alternatives to the toxic chemicals now used. Energy companies have the ability to utilize fracing solutions based on citrus oils or other organic materials. According to several on line patent information sites, there are a number of safer organic compounds available for use. Several patents have been issued and others are pending. So why not use these alternatives?

As chair of the Committee on Rules, (along with co-sponsors: Colton, Young, Zebrowski K, Glick, Hooper, Koon, McEneny, Weisenberg), Assemblyman Felix Oritz introduced a bill (A11606) on June 16, 2008 to address toxic fracing solutions. The purpose of this bill is to require companies to use non-toxic fracing solutions as part of a greater initiative to improve and maintain the natural beauty and ecosystem of NY, in addition to safeguarding the health and safety of New Yorkers.

“This bill, is a good idea,” stated Asher Terwilliger, Chemung County Farm Bureau President, and landowner advocate. “Companies need to analyze their current fluids and determine what else might serve the same purpose. It’s a long process and it won’t happen overnight. But it can happen.”

Bill A11606 currently sits with the Environmental Conservation Committee of the NYS Assembly. As of yet, there is no senate counterpart.