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The Big Secret? Fracking Fluids

Walter H. Tsou, MD, MPH

In 2008, Cathy Behr, a Colorado emergency room nurse at Durango Mercy Regional Medical Center was working the day shift when a gas driller worker, Clinton Marshall, arrived complaining of nausea and headaches. Marshall had spilled “fracturing fluid” on his clothes and boots and the smell apparently was overpowering and sufficiently strong that they evacuated the emergency room. Cathy Behr, without protection, had meanwhile spent just ten minutes tending to Mr. Marshall.

A few days after this ER visit, Behr appeared jaundiced and began vomiting

fluid and having difficulty breathing. Behr’s husband took her back to the emergency room where she was diagnosed with multiple organ failure, including liver failure, respiratory distress and erratic blood counts. She was admitted to the ICU with the presumptive diagnosis of poisoning from an unknown chemical.

The chemical was and is still considered to be a proprietary formula by the producer, Halliburton, a gas industry leader. It was later revealed to be a product with the trade name, Zetaflow. Halliburton noted that Zetaflow increases gas production by 30% and threatened that it would pull its secret sauce out of Colorado if it was forced to reveal what was in it.

You have to wonder why any environmental agency would allow a toxic chemical formula like Zetaflow to be injected into the ground, knowing that backflow and impoundment lagoons of fracking fluid result in chemicals wafting through the air, potentially exposing anyone who comes near. And you would not want to take a

risk that this could leak into your ground water, permanently contaminating a water source for future generations.

Unfortunately, we not only allow such a risk, but we exempt such chemicals from the Safe Drinking Water Act, the Clean Air Act and other environmental laws. By handcuffing the EPA legal apparatus from regulating the gas drilling industry, we have given that industry the exclusive right to extract gas using whatever proprietary chemicals they deem appropriate.

Touted by political leaders, including President Obama in the State of the Union address, gas drilling has been promoted as creating an energy independent future for America. But given the environmental realities, many in the affected gas drilling areas are having buyer’s remorse. Mark Smith, Chairman of Bradford County (PA) Commissioners, in one of the most heavily drilled counties in the state, wrote to the Governor in April 2011 that “the economic benefit of this development is unquestionable.

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Dr. Walter Tsou, the president of Philadelphia Physicians for Social Responsibility, is a past president of the American Public Health Association and former health commissioner of Philadelphia. He is a founding member of the National Board of Public Health Examiners and a board adviser to Physicians for a National Health Program.

An expert on health reform and health care financing, Dr. Tsou frequently briefs members of Congress on health care issues. He is the recipient of numerous awards, including the Public Health Recognition Award from the College of Physicians of Philadelphia, the Leadership Award from the Delaware Valley Healthcare Council, and the Broad Street Pump Award from Physicians for Social Responsibility. He was named Practitioner of the Year by the Philadelphia County Medical Society in 2001.

Dr. Tsou received his medical degree from the University of Pennsylvania and his master’s degree from the Johns Hopkins School of Hygiene and Public Health. He holds an honorary doctorate in medical sciences from Drexel University.

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Cathy Behr, the emergency-room nurse who nearly died from at-work exposure to drilling chemicals (Credit: Abraham Lustgarten/ProPublica)

Pennsylvania sits on top of the Marcellus Shale, a gas-rich deposit which can only be extracted using unconventional gas drilling through hydraulic fracturing. Fracking in the Marcellus Shale uses a mixture of hundreds of different chemicals, many of which are considered proprietary by the industry. A number of the known chemicals, including benzene products, formaldehyde, and petroleum distillate, are known carcinogens or toxins which would render water permanently undrinkable. Should any of this leak, for example, into the Delaware River which provides drinking water for 15 million people, it would be an unprecedented disaster.

In order to curry favor with the gas industry, Pennsylvania initially was the only state that had no tax for the gas industry. But with a 4 billion dollar budget deficit, it was clear that the public insisted that the gas industry be taxed.

Act 13, a bill largely written by the gas industry, creates a small impact fee (they can't call it a "tax") collected on behalf of impacted local counties and townships. In exchange, local zoning restrictions on the gas industry are

preempted and certain environmental setbacks are weakened. A part of this bill inserted at the last minute is called the "gag clause." Applicable to attending physicians, it requires a written promise of nondisclosure from

right to receive this (proprietary) information is the ability to share the information with the patient, with other physicians, and providers including specialists assisting and involved with the care of the patient. Further,

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—Mark Smith, Chairman of Bradford County Commissioners

doctors in order to learn the identity of proprietary chemicals used by the gas industry. This information cannot be shared with anyone else in the public. In the case of an emergency, such as Cathy Behr's case, doctors can learn about the chemicals verbally from a phone call after signing a written agreement.

The logistics of implementing this part of the law is a legal quagmire waiting to happen. For example, how does one promptly get information from the gas drilling company about proprietary chemicals in the timely fashion



A horizontal drilling rig for natural gas in the Marcellus formation in eastern Lycoming County, Pennsylvania.

necessary to treat a sick and maybe dying patient, if the company first has to approve written letters, activate verification procedures, and secure legal and corporate approval? Even in the case of a phone call, how does this happen, when at a minimum, the law requires a written confidentiality agreement?

Furthermore, what does it mean that the information cannot be shared publicly? The PA Medical Society asked the PA Secretary of Health for clarification. The Secretary subsequently stated that, "inherent in (physicians')

reporting and information sharing with public health and regulatory agencies such as the Department of Health is necessary and permitted." While the Secretary may write this, the law is not clear and offers no protection for a physician who consults others with the information about the chemical. And given charting practices, would it be legal or illegal to write the name of the chemical in the medical chart, assuming that only those caring for the patient are entitled to read the chart? It will take a lawsuit to sort this out.

The law exempts gas companies from disclosing the nature of contaminants from fracking flowback which are often laden with toxic heavy metals or radioactive isotopes. The modus operandi of the gas industry is tied to non-disclosure and confidentiality agreements, making research into the health effects of fracking virtually impossible. In a world where we insist on evidence-based medicine, we prohibit this when it comes to gas drilling chemicals. Is it any wonder that political apologists believe that fracking is safe? Or that many health professionals believe that fracking is unsafe?

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PSR
1111 14th St., NW Suite 700
Washington, DC 20005
Phone: (202) 667-4260
Fax: (202) 667-4201
Web: www.psr.org

