

Water on fire -- time to put this on ice

Md. should pass a moratorium on extraction of natural gas from Marcellus Shale

Heather Mizeur, Baltimore Sun, 12-20-10

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In 1969, the Cuyahoga River in Cleveland caught on fire and helped spark the American environmental movement. The result was landmark laws, the establishment of the Environmental Protection Agency, and a generation of efforts to end pollution of the air we breathe and the water we drink.

Forty years later and a short drive east, though, water is once again on fire.

A flood of natural gas companies has swept into Appalachia, bringing the promise of both economic development and an American energy revolution. New technologies now allow them to extract gas from deposits long thought untappable.

And yet at least a few of these same companies have had to provide bottled water to whole neighborhoods. Why? Because in the shadow of new drilling operations, some families have discovered that their tap water is now flammable.

Yes, flammable.

Water is so fundamental to our health and well-being that it is difficult to imagine the consequences of living in a world where it became more like lighter fluid.

But while the risks are real, so is the promise. The Marcellus Shale is an underground rock formation that spans from western New York to Virginia by way of Pennsylvania, eastern Ohio, western Maryland and West Virginia. Geologists tell us that deposits within the Marcellus Shale and other similar rock formations around the country would make us the Saudi Arabia of natural gas.

That could be a game changer. Natural gas produces only about half the carbon emissions of coal, and it is cheaper than oil. Businessman T. Boone Pickens and the environmental powerhouse Sierra Club agree that it could help us transition to a clean energy economy while improving our energy independence.

But it is the method of extraction — not the fuel — that has raised red flags. When combined with advances in deep drilling techniques, hydraulic fracturing, or "fracking," has enabled companies to extract these once untappable natural gas deposits. Wells are drilled into the shale first vertically, and then horizontally, at a depth between 5,000 and 20,000 feet. To release the gas, the rock is injected with a highly pressurized mixture containing at least 2 million gallons of water, 200,000 pounds of sand and 80,000 pounds of chemicals.

That would be like putting three Olympic-sized swimming pools worth of water, a sand volleyball court, and enough chemicals to outweigh five African elephants into the ground — for just one well. And according to some studies, 70 percent or more of this mixture stays in the shale and is neither recovered nor reused.

While these dangerous chemicals stay underground and threaten our water supply, complications from fracking continue to rise to the surface. Gas companies claim that the process is safe. Here's what we now know.

Fracking chemicals contain known carcinogens. Water wells are exploding, and tap water is flammable. Fish kills and dead farm animals have been documented. Worse still, little reliable data is available about the long-term effects of shale gas drilling on water quality, wildlife, livestock or human health.

So what is Maryland to do? The federal government has not offered much guidance. In 2005, special interests convinced Congress to exempt natural gas fracking projects from federal clean water rules — the same rules oil and coal companies must follow — in favor of state regulation. Though the EPA is taking a long overdue look at the relationship between fracking and drinking water, their report is not expected until the spring of 2012.

To date, no state has been able to properly assess the overall risk that shale drilling and toxic wastewater pose to our environment, our health and our economy. But because wells must be drilled through aquifers in order to reach the shale below, contamination is a very real possibility.

Neighboring states offer two very different paths we might follow. Pennsylvania launched head-first into the industry with little regard to health and safety concerns. New York, on the other hand, recently passed a moratorium on extraction permits to buy state regulators time to better understand the situation and develop rules that will keep the public safe.

Maryland should also take the time to get this right. That's why I am proposing a moratorium on Marcellus Shale drilling permits until the state can assess the risks that fracking poses to streams, rivers, lakes, groundwater and the health of Marylanders. Permits must not be issued until the state develops comprehensive safety regulations, procedures and the enforcement capacity to minimize that risk moving forward.

We cannot afford to get this wrong. We must exercise caution and restraint because without clean water, we jeopardize our health, our economy, our farms, our homes and our lives.

This natural gas has been under Maryland for millions of years, and if it means getting this right, we can wait a few more before moving ahead. We can live without gas, but never without water.

Forty years ago, it took a river catching on fire to get our attention. But we've already seen the warning signs this time around. Let's not wait until the Chesapeake Bay is in flames to act.